#### THE

# ANTEDILUVIAN WORLD;

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CONTAINING

A clear Account of the Form and Conftitution of the Terrestrial Globe before the Universal Deluge; proving it to be quite different from what it is at present. And also of the Origin and Causes of the said Deluge, Subterraneous Cavities, Seas, Islands, Mountains, &c.

#### By the late Dr. FRANCIS WALSH.

Si manifestissimæ certæque rationi, velut Scripturarum saucturum objicitur authoritas, non intelligit qui boc facit, & non Scripturarum illarum sensum, ad quem penetrare non potest, sed suum potius objicit veritati, nec quod in eis, sed quod in seipso, welut pro iis, inwenit, opponit. S. Augustinus, Epift. 7. que est ad Marcellinum.

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By the late Dr. PR. C. N. G. L. P. K. S. H.

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### PREFACE.

Difficulties which attend the common Opinion, that this Terraqueous Globe on which we live, to be fince the Beginning, and from its Creation, of the fame Shape and outward Form, as we now find it, with Hills and Mountains, Plains and Vallies, subterraneous Cavities, Rocks, Islands, Lakes and Seas; I cou'd not but doubt of its Truth, and think it had a far different Face and Form before the Deluge, from that which it has now. The Difficulties attending the aforesaid Opinion may be reduced to four Heads:

First, If this Earthly Globe had been of the fame Shape and outward Form before the Deluge, as it now has, or any thing I ke it, the Universal Deluge (of which so much

#### PREFACE.

is faid in Holy Scripture) cou'd not have

bappened.

Secondly, On that common Hypothesis no Paradise agreeable to the Scripture-Account of it, could have been on Earth.

Thirdly, The long Age of Men before the Deluge, which Scripture likewise mentions,

wou'd not naturally have been possible.

And lastly, It wou'd not be suitable to divine Providence, and God's infinite Goodness, to have created this Terraqueous Globe, as now it is:

These Dissipulties I will endeavour first to urge, and then will deliver my own Opinion on the whole Matter, which cannot be centur'd as altogether singular, for John Baptist Alatinus, a learned Neopolitan, in his Paraditus Terrestris, and Doctor Burnet in his Sacred Theory of the Earth, held the same, and shall be my Guides, in this no less curious, than intricate Treatise.

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#### THE ANTEDILUVIAN

## WORLD, &c.

how many intercable Difficulties

#### CHAPTER I.

Noah's Deluge cannot be explained on the common Hypothesis.

In N the Seventeenth Century after the Creation, there happened a great Innundation of Water, which covered all over, not one Region or Country alone, but even the whole Earth, so that the Water overtop'd the highest Mountain, for, as is said, Gen. 7, v. 11. The Fountains of the great Depth were broken up, and the Flood-Gates of Heaven were open'd; by which all Mankind perished, excepting a few that were saved in Noah's Ark. After a time the Waters dead of the same of t

creas'd, the Waves and Billows settled, being received into their Receptacles, the Mountains and Fields appeared, with all the habitable Land, much after the same Form and Shape as it now appears. And thus happened the Ruin and Destruction of the Old, or Antediluvian World, and the Restauration of the new, or Postiluvian Globe.

But how many insuperable Difficulties does this short Narrative contain? What an exceeding quantity of Water would be required to overflow, first the whole Surface of the Earth, and then to heap up over all the Plains and Valleys, and rife into the Air fifteen Cubits above the highest Mountains on Earth; for Scripture tells us, Gen. 7. v. 18. 10 and 20. That the Waters overflowed exceedingly, and filled all on the Face of the Earth, &c. and they prevailed out of Measure upon the Earth, and all the bigh Mountains under the whole Heaven were cowered; fifteen Cubits higher was the Water above the Mountains. Where shall we now find in Nature such a vast quantity of Water? How many Oceans wou'd be necessary to make up this immense Ocean, spread all in the Air without Coasts, Bounds, or Limits? Was and was a smile one

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The better to understand this, and bring the matter to some certain Rule, let us suppose all the Hills and Mountains on Earth to be taken away, and the whole Surface of the Earth to be en a Level, or rather in a plain continued Convexity with the Sea from whole Surface to the top of the highest Mountains under the Heavens, let there be but one Mile and a half, or but one Mile only (that we may the less favour our own Opinion) tho we be certain that there are some Mountains two Miles higher than the Sea. Let us suppose also that our Ocean now extant, covers half the Surface of the terrestrial Globe, which is also doubtless, and that it is a quarter of a Mile deep in common Places I fay in common Places, for the 'the Main Ocean be much deeper in the middle, even not to be founded, yet this Depth for the most part increateth by Degrees from the Shores, to that if the Waters were taken away, you might walk from the Coasts to the middle of the Channel, as from a great Hill to a Valley; and confequently the nearer we are to the Shore, or Land, the Water commonly is shallower and sometimes but few Perches! or Yards deep. Moreover in all Bays, or Straights, and betwixt Illands, the Seas are feldom of that Depth, and there are many B 3 diameia.

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Places even fordable. Wherefore I think that a quarter of a Mile, or two hundred and fifty Paces, may be very well allowed for a common Measure of the Depth of the Ocean. Therefore in the general Delinge, it was necessary that four Oceans more, like our present Ocean, should be heaped over it, so as to make up that huge Mass of Water requisite for such a Deluge, and also four other Oceans to cover the rest of the terrestrial Globe, or the dry Land so that there are eight other Oceans, like our present, requisite for the Deluge.

Tis true, that Mountains, Hills, and Rocks take up a confiderable Part of the dry Land, much higher than the Seas; for that you might think fuch a Mass of Wat ter not requilite to overflow the dry Land to the top of the highest Mountains, as there is requisite to swell up the Seas to the same height. But to make amends for this, and to confirm our Calculation; it is to be noted, first, that we supposed the Mountains to be a great deal lower than really they are, especially if we consider the Mountains. of the middle of the Earth, for if we compute the declivity of the Earth, from the Foot of fuch Mountains unto the Sea, (which Declivity is foon understood by the Course and running of Rivers) we shall find them much Places

much higher than we supposed them to be; for the height of Mountains is taken from their Bases, or the Plain on which they stand; and if they be at a long Distance from the Sea, you may well add as much more to their height, by reason of the Declination of the Earth from their Bases to the Sea; for Example, The Mountains of the Moon, are in the first place as high as the Ascent is from the Egyptian Sea, where the River Nile unloads it self, to the Foot of them Mountains, and besides, as high as from that Foot to their Tops; for both must be computed when we measure the height of Mountains in regard to the Surface of the Sea. Wherefore, not only four (as we faid before) but seven or eight other Oceans should be heaped over our present Ocean, that the Water might transcend the highest Mountains, and that (which is more) fifteen Cubits, as Holy Scripture requires; which is enough, in my Opinion, to recompence the less Quantity of Water requisite to overflow the dry Land, by reafon of the Mountains, Hills, and Rocks,

Secondly, it is to be noted, that the Regions in the Air, are much more ample and capacious, than the concentrical Regions of the Earth, in equal Thickness; for, of all the Surfaces of a Globe, the nearest the

B 4

Center

Center is the smallest, and the most remote is the greatest; wherefore a Region of a Mile high from the Earth, is of a much more ample Space and Capacity upwards, than downwards, requires a greater Quantity of Water to fill it.

Lastly, There are several Valleys, and entire Regions, lower than the Surface of the Sea; and also many Vacuities, and subterraneous Cavities, which should be filled with Water. All which when well confidered, you will foon find that eight Oceans more, each of them as great as our prefent Ocean, are necessary to make an universal Deluge, after the manner commonly understood, notwithstanding the Mountains, Hills, and Rocks of the dry Land; and not only eight but fixteen Oceans more, would be requifite, if we had exactly calculated the height of the inland Mountains, and the vast Capacity of the aerial Regions: But we think eight to be sufficient for our Purpose; for fuch a Quantity of Water cannot be found in Nature; and he that can find eight Oceans more, may as well find fixteen nay, an hundred.

Tell me then, I pray, where can we find in this World fo many Oceans of Water? From what fource shall we derive them? You will say, perhaps they

came

came from Heaven in the great Rain which then continually fell for forty Days and forty Nights. But from Heaven we can have but very little, in comparison to the great Quantity of Water we want, not even as much as wou'd make up one Ocean of the eight; nay not the tenth part of one Ocean, if we give credit to the Observations which great Men have made on this point. That great Philosopher Mercennius, Cogit. Phyf. Moch. page 221. makes this Computation concerning the Quantity of Water which fell, or might fall in time of the Deluge: It appears, fays he, by our Observations, that a Cubick Vessel of Brass in half an Hour's Time is filled to an Inch and an half deep by our greatest Showers of Rain; but fince the Vessel foaks nothing that is perceivable of the Water, as the Earth does, let us suppose only an Inch deep: Then by just Computation the Waters rais'd to one hundred and fixty Foot over the Surface of the Earth, dry Land, in forty Days, and forty Nights that it rained, in case the Rain had been continual, and still equal to our greatest Showers, and that it rained so all over the whole Earth. But, fays he, the Water, or Rain of the Deluge should be ninety three times greater, that it might overflow in that Space

Space of Time, to fifteen Cubits over the Mountains of Armenia, which Mersennius extends to a League in Height. And fo by this Author's Calculation, forty Days, and forty Nights pouring of Rain constantly. over the whole Face of the Earth, cou'd Supply us with no more than a little above the hundredth part of Water, which was necessary for the universal Deluge. And truly, however we manage this Matter, or moderate either this, or the precedent Calculation, it is certain after all our Endeavours and Attempts, there will be still an almost infinite Quantity of Water wanting for the noetical Deluge, according to the received Hypothesis; especially if we confider (as we should) that the Regions of the Air in their Ascent are still gradually of a greater Capacity, all which must have been filled with Water to the height of fifteen Cubits above the highest Mountains. The Author of the Catena, on Genef. 7. cap. 3. fays, if the Deluge had happened by means of Rain alone, as it is commonly thought, then not only forty Days, and forty Nights Rain, but even forty Years Rain would have been too little. Nay, if wo should think that the Air itself was on sett, purpose condensed, and transelemented into Water, the Region of the Air wou'd not fuffice &

fusfice; If we remember that the Air turned into Water takes less Space by one hundred times: Then what shall we do? From what part of this World, or from what Regions subterraneous, middle, or ethereal, shall we fetch all the Waters which are wanting? Truly if those vast ethereal Regions were filled with Water, and that they poured them down to us, I doubt not but they might fuffice : Yet to affert fuch Oceans of Water above the Heavens, is a thing clearly exploded nowa-days (fince the Fluidity of the Heavens, with their Order, and Disposition is found out) and look'd upon by learned Men as a very ridiculous Opinion, inconfistent with Philosophy and Astronomy; And even in case there were such Water above the Heavens, and that they fell down to us in time of the Deluge in such great Showers, that they might have made up those several Oceans necessary for an universal Delage; tell me, I pray, when the Deluge ceased, whither did all this Water go, or where does it lie now hidden? But we need not speak any more of these supercelestial Waters, fince all learned Men now acknowledge the Folly of that Supposition; and hereafter we shall explain the Nature, Seat, Origin and Use of those Waters the

Waters which Holy Scripture sometimes says to be above the Heavens, that is a bove the Air, or in the Clouds.

Having thus fearched in vain the fuperior and middle Places, or Regions, there remains only to examine the fubterraneous Regions, and what Quantity of Water we can expect from thence. And to be brief, let us freely allow as much Water to be hidden in the Bowels of the Earth, as there is exposed on the Face of this terraqueous Globe; to wit, as much as there is in the Ocean, and in all other Seasp Lakes, and Rivers; tho' it be altogether incredible. And let us suppose that the Earth, by whatever Force, Violence, or Impulse you please, to have cast out all that Water at once over the whole Barthe what will this avail? Will it come near our Computation at least of the eight Oceans wanting to make up the Deluge? You find out but one, and that for a last Shift: where then shall we find the rest? We have drained all the celestial, terrestrial, and subterraneous Treasures of Water, and as yet we want full fix or seven Oceans more to complete the universal Deluge. Moreover, if all these Oceans and huge Heaps of Water were found, wherever you please, and that they could overflow. the

the whole Earth, whither did they retire again when the Deluge ceased? Or rather how could the Deluge ever cease? Or how could the Earth be ever discharged of such a wonderful heap of Water? I do not understand how they could be consumed.

You will perhaps fay there was no netceffity for all those Observations, Calculations, and Arguments; the thing being done by a new Creation: for the Almighty God, to cause the universal Deluge, created new Oceans of Water, as many as were requisite, and after the Deluge, anni-

hilated them again. vd draw and bub spaled

To this I answer with St. Augustin, lib. 2. de Genef. ad litt, that it is not convenient to have Recourse to Miracles, or to the Omnipotence of God, when we are to explain such things, but rather to Scriptures; his Words are these: For now it is fit we should enquire according to boly Scriptures bow God has instituted the Nature of Things, and not to fay that he was pleased to work in them, or by them, with any Miracle of his Omnipotence. Moreover, if we admit this Creation of a new material Substance, then we must fay that God at the fame time annihilated as much more of other material Substances, upless you Necessary. admit

admit a Vacuum, and truly a vast one! and fuch as would be capable of receiving fix or feven Oceans; for material Substances or Bodies cannot penetrate one another. And afterwards, when the Deluge ceased, or was actually ceasing, the fame should reduce to nothing all the Diluvian Waters which he created a little before, and recal again by a new Creation the material Substances which he annihilated before. All these Reciprocations, and as it were Retractations in God's Actions ad extra. feems very unbecoming his Divine Majesty. Besides it is very clear in Scripture, that the Deluge did not cease by any sudden or instantaneous Annihilation, but that the Waters abated by degrees, and by little and ittle withdrew from the Surface of the Earth; for first the Tops of the Mountains were discovered, and afterwards by degrees the Plains, and lower Lands; and the same holy Scripture tells us, that the Deluge increased after the same manner: which does not agree with instantaneous Actions of Creation, and Annihilation. In fine the most part of our Divines do not allow the Creation of any new material Substance, fince the Work of the first fix Days; and the few that allow it, fay it should never be admitted without extream Necessity,

Necessity, which there is not in our Case: for I shall shew hereafter, chap. 12. how the universal Deluge could, and did happen, by natural Causes, without any Recourse to Miracles, tho it could never happen so on the common Hypothesis, as has been sufficiently proved.

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On the Common Hypothesis, no Paradis

happen to on the common Hypothesis T TOLY Scripture tells us, Gen. 2. v. 8. that our Lord God had planted a Paradife of Pleafure, wherein he placed Man, and that a River issued out of that Paradise of Pleasure, which was divided into four Branches, the Name of one, Phison, the Name of the second Pebon, the third Tygris, and the fourth Euphrates. But that Adam eating the forbidden Fruit, was cast out of this Paradise of Pleasure, into some other Country or Region, and that a Cherubin, with a flaming Sword was placed before that Paradise of Pleasure, to hinder all Mankind from going thither any more. By which appears that the whole Earth was not that Paradife of Pleasure where 'Adam was placed, but fome part only, or particular Region of it; tho' I do confess that the whole Earth, or at least the most part of it, from Adam's Creation, to the Deluge, had a great Resemblance to Paradife, and might reasonably be called in some measure Paradisiacal, considering the general Phænomena's common to it, and to that particular Paradise where Adam was placed in the Beginning, as we shall shew hereafter. All Authors both profane and sacred, agree that in the antediluvian, or new paradisiacal World, and especially in that particular Spot of Ground which was called Paradise, there was a perpetual Mildness, Calmness, Sweetness, and Serenity of Air, never darkened with Clouds, never disturbed by Storms, never corrupted by any unwholesome Exhalations, but a constant Spring exceeding temperate, without the least alteration of Weather, or Seasons, as fustin Martyr, Tertullian, Basil, Augustin, and other holy Fathers tell us; which Alcimus Avitus in Genes. speaking of Paradise, thus elegantly declares,

Non bic alterni succedit temporibus unquam Bruma, nec æstivi redeunt post frigora Soles; Hic Ver assiduum cæli clementia servat: Turbidus Auster abest, semperque sub aëre sudo

Nubila diffugiunt, jugi cessura sereno. Nec possit natura loci, quos non habet, Im-

Sed contenta suo dotantur germina rore. Perpetud viret omne solum, terræque benig-

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Blanda nitet facies: Stant semper collibus berbæ, Arboribúsque comæ, &c.

And this was in my Opinion, that State and Condition, not only of that particular Region of Paradife, out of which Adam was banished, but also of the most part of the terrestrial Globe after the Creation, and continued so to the Deluge, as we shall hereafter set forth. Now, I say, if this terrestrial Globe on which we live, were fince the Creation, of the fame Shape, outward Face and Form, as it is now, that ho Paradife could ever be found on Earth. by reason the aforesaid Phænomena's, and Properties could never agree with any part of our terrestrial Globe, as it now appears. My Reasons are, because the unproportionable Form of this terraqueous Globe, and the Inequality of the Times and Seasons of the Year, are directly opposite to the constant and perpetual Calmness, Serenity, and Temperateness of Paradise, where there was no Alteration of Weather, or Seasons, but a continual Spring. This terrestrial Globe is exposed to Wind and Tempests, subject to Thunder and Thunder-bolts, sometimes frozen with Cold, fometimes burning with Heat, and always **fuffering** 

fuffering the Rigour of unconstant Seasons, and innumerable Damages of the Air.

'Tis true, some Regions of this Earth are more mild, pleasant, and temperate than others, and enjoy a more mild and gentle Air; but notwithstanding you will find no Region on the Face of the Earth, but what is somewhat subject, more or less, to the faid Inconstancy, and Intemperateness of the Air: In all Countries, under all Climates, there are some Changes and Alterations of Heat and Cold, of Winter and Summer, with fuch Mischiefs as attend them. In. fome Countries, the Heavens are fo unkind, the Earth fo malignant, that they are not habitable; fuch are the great Defarts of Africa, and especially of Libya, the Wilderness of the Rocky and Sandy. Arabia, of Tartary, and others. Can People live well and happily, as in the golden Age before the Deluge, where the Earth is covered with deep Snow, and long Nights for feveral Months in the Year? Or where the fwarthy Inhabitants breath a short Life, infested by the scorching Heat of the Sun? Neither is there any select Part, or particular Tract of this Earth, that might be in any manner the Seat of Paradifiacal Happiness; for in all' Places on Earth, even under the most temperate Climate,

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mate, the Inconstancy of the Air and Seasons wou'd still hinder it. Where, I pray, over the whole terrestrial Globe, cou'd a Man tarry, and live, and happily live, both Day and Night, under the openAir, throughout all the vicissitudes of the Year, as the first Mortals did? What select Part of this Earth, could naturally, and of it self give Fruit and Corn, and afford all Things requisite for Man to live, not miserably, not pitifully, as several Nations now live, but prosperously, but happily, as Men did in

the first Age of the World?

You will say, perhaps, that after Adam finned, the Almighty God cursed this Earth. Well, did he also curse Paradise, or that Tract of Ground out of which he banished Adam after he finned? If so, what Necessity was there in banishing him? Why so careful in placing an Angel with a Flaming Sword at the Entrance of it, to hinder all Mankind from going thither? Was Enoch and Elias translated to a curfed Place, when brought into that Paradife, as St. Augustin tells us, lib. 2. contra Pelag. Chap. 23? But if you say that Paradife was not curfed, it should be still extant, if part of this terrestrial Globe as now it is; and then we defire to know where it is? Whether in Europe, Afia, Africa, or America?

And in what particular Tract of these four great Parts of our Globe? And if the Earth was curfed by God, were the Heavens and the Air also cursed by him? What did disturb and confound the planetary Heavens, and the Skies which before were fo mild, and ferene? What has corrupted and poisoned the Air? Or what has changed the Nature of all etherial Bodies, and corporeal Substances? We have the fame Sun, the fame Stars and Constellations, and all things above us, as far as we know, are after the felf fame manner as they were from the Beginning: Therefore if no Change, or Alteration happened to this terrestrial Globe, why don't we enjoy the golden Times and the perpetual Spring of the Antediluvian World? Or at least why can't we find out that particular Tract of Ground called Paradife, where Adam was before he finned?

You may fearch as long as you please all the Corners and Regions of this habitable World for Paradife, or for any Tract of Ground fit for it, and you will find at length all your Labour lost; for if its Place be on this Earth, as you must say it was, then it must be either in some Continent, or in fome Island or other. It cannot be in any Continent, or main Land; for fince in all fuch

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fuch there are Mountains, Valleys, and unequal Tracts of Ground, the Course of Vapours must be irregular, and the Heavens inconstant, with a turbulent Motion of the Air, which agrees not with the Phanomenon of Paradise. And as for Islands, I confess, that in some of them, especially fuch as have no Mountains, the Air is fomewhat more mild, more equal and temperate, by Reason they being surrounded by the great Plains of the Ocean, the Vapours cannot be fo eafily condenfed, nor agitated by contrary Motions; as we fee in the pacifick Sea, which for the most part enjoys a mild calm Air; yet notwithstanding there are sometimes most cruel and outrageous Tempests, and Storms, Æenephies (a Storm where a Cloud is broken) Æxhydries (a Storm with huge Rain falling in an entire Cloud) in the Sea; and in great Seas, as the Storms are more feldom, fo they are more fierce and horrible when they happen. The like I say of fuch Islands as are void of Hills and Mountains, and that therefore are more temperate; and consequently unfit for Paradise, besides, since all Continents are nothing but great Islands, if Paradise could not be in an Island, neither in any Continent, as the Globe now stands. In one Word there is

no Island, or Continent, but what is subject to several Changes of Weather, and Alterations of Seasons, more, or less; and

consequently unfit for Paradise.

We do not design by this to deprive altogether this Earth of Paradise, as if we were to search for it in the Moon, or in the Regions of the Air: We suppose undoubtedly that it was on the Surface of this Earth; but we contend that this Surface was otherwise disposed and ordered before the Deluge, than now it is, and that the whole Body of this Earth had not only another Shape and outward Form, but also a more commodious Situation to the Heavens and Planets, than now it has, as we shall hereafter shew.

There were some learned Moderns thought Paradise to be in Mesopotamia, others in Palestine, and others in the Island of Toppobane: But these good Men go very far both from learned and sacred Antiquity, and plainly contradict them in sundry Ways. Stanchus Æugubinus thought it lawful to violate openly and with laborious Study, the Rights of Antiquity, to subvert utterly the Opinions of the antient Fathers, and turn the venerable Mystery of Paradise into a meer Fable of a certain Garden, or some small piece of Ground in Mesopotamia.

The holy Fathers tell us, that Paradife was very remote from our Orb, and unaccessible to all Morrals; some of them placed it in the third Heaven, some in the Moon, some in the Air, some in the top of a high Mountain, some in another Earth, some in another World; and St. Augustin says that it was truly a terrestrial Place; but very remote even from the Thoughts of Men: but if it had been in Mesopotamia, Palestine, or in any other Tract of Asia, or neighbouring Country, and as I may fay, before their Eyes, or under their Feet, to what purpose would they fearch for it in Heaven, in the Clouds, in the Air, in another World? But let us hear the formal Words of some of them for all, and of some of our chief Divines. St. Bafil Hom. de Parad. Says, That Paradise is a Place more bigh, and more excellent than the whole Earth, wonderful in its Beauty, conspicuous of all Sides, free from Darkness and Shadows by reason of its Height. St. John Damascene, lib. 2. de Orthodoxa sid. Chap. 11. fays, Paradise is higher than all the Earth, adorned with a most temperate Climate, and with a most mild and pure Air. Historia Scholastica in Gen. 13. says, Paradise is a most pleasant Place, distant from our babitable Zone by a long

long Tract of Ground and Sea, and fo bigh that it reacheth to the Lunar Globe. Peter Lombardus, Master of the Sentences, fays, 2 Sentent. dift. 17. Wherefore they fay that Paradife is in the Eastern Parts, and so bigh that it reacheth to the Lunar Circle. Albertus Magnus, Part 2. Sum, Theol. Tract. 13. Quest. 79. This I fay without any Prejudice to a better Opinion, for I found in some most antient Books, that St. Thomas Apostle was the first Author of that Opinion, which Bede and Strabo follow, to wit, that Paradife is of fuch a height, that it reacheth to the Lunar Globe. And the Reason why these Fathers, and great Divines placed Paradife fo high, or near the Lunar Circle, was because it must be a Place free from all Vapours, and from all obscure, gross, dull, and foggy Air, as Dionif. Carthufian. noted in Gen. Art. 19. Paradife is faid to reach up to the Lunar Orb, by Reason no Vapours come to that Place. But if Paradise had been in Mesopotamia, Palestine, in the Island of Toprobane, or in any other known Part of this terrestrial Globe, do you think but it should be subject to Vapours, to obscure, gross, and dull Air, to Winds, Storms, and Tempests, to Cold and Heat, to the Alteration of Seasons, and their Inconstan-

cy, and to all the Evils that attend them ? For it is well known that all the Parts of Mesopotamia, Palestine, and of all this habitable World, are subject to these Changes, more or less: How then could that be a fit Place for Paradise? Was it in Melopotamia, that the antient Fathers Justinus Martyr, Ireneus, St. Augustin and others, placed Enoch and Elias, when they affure us that they were tranflated to Paradise, and are as yet there? Did St. Bafil, St. John Damascene, and others, mean Mesopotamia, when they said that Paradise was without Clouds, Winter, and all Alterations of Weather and Seafons? Is it to Mesopotamia that Tertullian translated the Souls of the Just deceased before the coming of Christ? For certain these Fathers never dreamed once of Mesopotamia, or of any such Place when they spoke of Paradise.

Moreover, Holy Scripture says, that a River issued out of Paradise, and was divided into four Branches, or rather Rivers, Phison, Gibon, Tigris, and Euphrates; but it is well known that these four Rivers do not take their Rise in Mesopotamia, or Palestine, or in the Islands of Toprobane in the Indian Sea; neither do they begin from one Spring; but many hundreds of Miles asun-

der; how then could Paradife be in Mesopotamia, or in any other Part of Afia? Truly there are as many Opinions, and more concerning these four Rivers, and in explaining their Rife and Courfe, than there are concerning the Place of Paradife: For fuch as even agree in faying, that Mefopotamia is the Place, yet they disagree in explaining these Rivers; and each of them fully answers the Reasons of the rest. But let me ask you, if that Spot of Ground in Mesopotamia, be the Place of Paradise, and that the aforesaid four Rivers took their Beginning from thence, what Course did the River Gibon take, (not to speak of the rest) that passing from thence it should furround all Æthiopia, as now it does? Did it pass over the Red Sea, or did it go through the I/thmus of Egypt? Is there any Track of that River all over this Isthmus? How could it take such a Course higher than both the Seas? Or how could it pass from thence into Æthiopia, against the full Course of the Nile? For my part, when I consider the incredible Courses, the Plungings, Sinkings, the blind and fubterraneous Progresses of these Rivers, which our Adversaries invent to uphold their drooping Systems, and how ill they anfwer the Nature of Things, and the facred History

History of Paradise, I see myself without any Hopes of finding the aforesaid sour Rivers of Paradise in this terestrial Globe, as it now stands.

In fine, Scripture tells us that an Angel with a flaming and turning Sword was placed before Paradife, to hinder all Mankind from going thither, and to keep the Tree of Life. We would be much obliged to the Maintainers of the Mesopotamian Paradife, if they had shewn us any such Place, and so guarded in Mesopotamia, or elsewhere on Earth: which if do not, I know no reason why they should place Paradise in Mesopotamia, or in any other Part of Aha, rather than in Europe, and in some Kingdom or Province thereof. Several Holy Fathers and Divines, understand by that slaming Sword placed before Paradife, the Torrid Zone, or Antihemisphere, who consequently place Paradise beyond that Zone; Tertullian says, Apol. ad Gen. 1. 47. That Paradise is separated from the Knowledge of our Orb. or World, by a certain Wall of a Fiery Zone. St. Cyprian, who is faid to be the Author of that most antient Poem, Chap. 2. in Gen. speaking of Adam and Eve, when they were cast out of Paradife, thus says, Dejectofque

St. Isidore, Hispalen. lib. 14. Etym. speaking of Paradife, thus fays, There is no Cold, nor Heat there, but a perpetual Temperateness of Air: After Sin, it was of all Sides Surrounded with a flaming two-banded Sword, fo that its Flames, almost reached the Heavens; there were also Cherubins, that is, a Guard of Angels, ordered to rule the flaming of that Sword, that the Flame might drive away the Men, and the good Angels the bad ones. And in fine, (omitting feveral others) . St. Thomas of Aquin. 2 a. 2 æ. quest. 164. Art. 2. ad 5 m. fays : That Place (he speaks of Paradise) seems chiefly to be inaccessible, by Reason of the Vehemency of the Heat in the intermediate, or middle Places, from the nearness of the Sun; and this is fignified by the Flaming Sword, which is faid to be a turning Sword, by reason of the circular Motion of the Sun. the only Cause of this Heat.

If Paradise is, or was beyond the Torrid-zone, how could it be in Mesopotamia, or Palestine? And what place on the

the whole Earth, not excepting Mejopotamia, can now be found, which is feparated from our World by a Wall of
Fire, or by such Flames as reach almost
up to Heaven? Or is there any Place in
Mejopotamia, or in the whole Earth altogether inaccessable by reason of any
Vehemence of Heat in the intermediate Places, proceeding from the nearness of the Sun? Out of all this, I conclude, if this terrestrial Globe had been
before the Deluge, and since the Creation, of the same Shape, and outward
Form, as we now find it, no Paradise
could be on Earth,

#### CHAP. III.

The long Age of Men before the Deluge would not be naturally possible in the common Hypothefis.

WE can find no greater Difference, or any thing more to be admired, betwixt the antediluvian and postdiluvian People, than the prodigious Disparity of their Age; the Antediluvians living, some to feven, fome to eight, and some to nine hundred Years and more, whilft the Postdiluvians hardly attain to one hundred Years. If the long Age of the Antediluvians had been still joined with perfect Innocency of Life, and had ended with it, I could eafily be perswaded it happened by some particular and supernatural Dispolition of God, ordering it so above the reach of Nature: but that long Life continued to the Deluge, when Mankind notably degenerated from the Obfervance of the divine Laws, and continued in People very notable for their Wickedness till their end: wherefore it must proceed from natural Causes. It. is in vain to fay that it proceeded from a low, temperate Diet, and not eating Flesh.

Flesh. For several Religious and Monasticks liven even this Day after that rate, and yet hardly one of them attains to the hundredth Year. And to fay there was an unufual Strength and Vertue in the Herbs and Fruits of those Times, more than after the Deluge, is gratis dietum; for the long Life of Men continued to the Deluge, the Earth being cursed by God long before: neither do the Gentlemen that hold this Opinion, explain to us in what Form, Contexture, or Disposition of Parts, or in what Temper of the Herbs and Fruits, does that vivifical Strength and Vertue confift; and how does any Man know, but the Herbs and Fruits of this Day, or at leaft foon after the Deluge have or had fuch Parts or Particles, fuch vivifick Strength and Vertue? Moreover, we do not grow old, neither does our Life decay for want of good Aliment; neither are Victuals better, or more excelling in fuch Regions of this World where people live longer, than they are in other Countries where they live shorter.

In short, great Age, especially of hundreds of Years, cannot proceed from the Goodness alone, or any Condition of Food; for the Goodness, or Excellency

of any Food confifts in this, that it be able to afford plentifully a delicate Succus, or Juice which may eafily be converted into Blood and Flesh; or which makes fuch Flesh, whose Particles may not eafily be diffolved, and dispers'd: but these two Properties, are so contrary to one another, that they can hardly be found in the same Aliment: for the more delicate the Juice is, the more tender and flexible are its Particles, and the more tender and delicate Flesh they make. whose Particles are therefore the easier confumed and worn away, as we fee in Children and fickly People: and fuch Food as this does not feem to have any fingular Strength and Virtue that might cause a long Life of hundreds of Years. The other fort of Aliment, whose Parts are more folid, and makes less diffoluble, or diffipable Flesh, seems a great deal more fit for the prolonging of Life; but fince it is requisite for the Preservation of Life, that not only the Flesh and Bowels, and principal Parts remain in being, but also that they remain in a certain Temper and Disposition, fit for the Exercise of all corporal Functions, both natural and vital, and fince overmuch Hardness, Stiffness, Dryness, or Toughness

Toughness of the Fibres, (which must follow those Parts that are made of the faid folid Aliment) do very much hinder the faid Temper and Disposition, the Confequence is, that neither by means of fuch Aliment, or Nourishment, our Life could be prolonged for so many hundred Years, if the fame external Caufes had been before the Deluge, which now after the Deluge drys and wears away the Body, and perverts the whole Temper of the Wherefore, as neither the one Parts. kind of Aliment, nor the other, nor both together, can be sufficient of themfelves, and in all Regions, to prolong human Life so far; so I think that any one of them might fuffice, supposing the right Concurrence of outward Causes, and that the Temperateness of the Climate and the Air be fuch, that neither the small tender Parts of one Food be foon diffipated, nor the strong folid Parts of the other over-much stiffened, or hardned; and fince we fee that in all Regions and Countries, People use divers forts of Food, and that with good Health, I must conclude that in all Nations there are good Aliments, and that it is not (whatever Food it be) the Cause why the Postdiluvians lived so short, or the Antc-

Antediluvians so long; and I am perfuaded if they had enjoyed the same Air, and external World with us, that they would never have lived seven, eight, or nine Ages, tho' they had been nourished

with Nectar and Ambrofia.

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Wherefore I say, that the shortness of our Days in comparison to the Antediluvians, proceeds most of all from external Causes, and from the action of the Air, and the more temperate it is, and equal in its Temperature, or the more intemperate and unequal, the more or the less, the sooner, or the later, it changes, and weakens the State and Constitution of our Bodies, For we fee by daily Experience, that in some Islands where the Climate and Action of the Air is more temperate, uniform, and even, there People live longer than in other Regions, where such Equality and Temperature is not found. So among all the known Regions that I have heard of, the Islands which they call Æstivæ, or Bermudæ, are well known by reason of the long Life of the Inhabitants, for many of them live two hundred Years, which feldom, or never happens in other Countries: Neither can there any other Reason be found for this their long Life,

but the notable Temperateness and Uniformity of that Climate and Air, which is fuch, that there is no great Difference of Seasons to be found there. On the contrary, in Virginy, not very far from the Bermudes, the People commonly live a short and fickly Life, by Reason of the reat Mutability of the Air. Hence we see no great Difference in length of Life a nong the Europeans, by Reason the action of the Air over all Europe, is intemperate and unequal much alike; among those of Affrica the Difference is greater, by Reason that in some Regions there, the Air is some what more constant and equal. With this agrees the Experience of fuch who change a hot Climate, for a cold one, or contrary-w. le; for they feel themselves weakned by it, and their Days shortned. So they tell me, that the Dutch who spend a great Part of their Time, especially from their Youth, in ha Climates, when they return home, they fall into several Distempers, and their Life is shorten'd; for such Extremities of Alterations, cannot but annoy their Life and Body, not only, that the Temper of the Blood is changed, but because the Habit of the Body, and the tone of the folid Parts of the Fibres and Entrails, being disposed after

ter a certain Manner by the Action of one Climate, when it undergoes the Action of another, far different from the former, it is perverted, and the Parts are rendered more unfit for the Exercise of their Func-

tions, both natural and vital.

We fee also in the same Climate, that the Alteration of the Year in Spring and Autumn, affects the Body in fundry Ways, and frequently induceth Distempers, by Reason that the Humours, the Order and Texture of the Particles of the Blood. are changed by fuch Alterations, from which unufual Fermentations arise. And I am of Opinion that the same yearly Alteration of Seasons, work also much on our Bowels, and the folid Parts of our Bodies: For the fuch Alterations of Seasons cannot dissolve the solid Parts, yet they alter the interior Form and Disposition of the Fibres, and Pores, as also the certain Order which the Organs of our Bodies have, in as much as they are destinated, each to its proper Function and Use: And because this Alteration of the folid Parts, happens by Degrees, and very often without being accompanied with any Distemper; hence it is that we do not perceive fuch annual Alterations of these Parts, but happening every Year, Bloce

more and more, at length they cause a manifest Weakness and Defection: And this is apparent in fuch People as by watching and toyling, by immoderate Heat and Cold, difturb the whole Oeconomy, of their Bodies; for tho' they don't fall suddenly into Sickness, yet by weakning the Fibres of the Body, they hasten old Age, and shortens their Days: As on. the contrary, fuch as are not exposed to these Violences, and Extremities, but live a quiet calm Life, still much after the fame manner, provided they do not fall into Distempers, they continue the longer vigorous, and active, and are more durable. Wherefore the length or shortness of Men's Lives is to be ascribed most of all to the interior Form of the Body, and Disposition and Order of the Fibres and Bowels, either well preferved in the fame State and feldom changed; which Change happens by external Causes, as is manifest in the former Examples, tho' it happens also often by internal Causes, as by Gluttony, Drunkenness, Lust, and other Excesses: But because these interhal Causes take not place in all Men, and Experience shews that all are of a short Life fince the Deluge, hence it is that we have great Reason to affirm external Agents Agents to be the universal Causes of the shortness of human Life, to wit, the Alteration of Seasons, and the unequal actions of the Heavens, of the Air, and of the exterior World variously acting upon our Bodies, according to the divers Seasons and Alterations of the Year, and Weather.

Let us I pray confider Man in the Flower of his Age, when he is about twenty Years: Let us suppose him to be of a lusty, found, and healthy Body, as may be; let him be nourished with the best of Victuals, and live very moderately in all Things. Now the Question is, why that Man does not continue in the fame State and Vigour of Health for many hundreds of Years? This Question is of no small Moment; neither is it fo eafily answered as common People think. Such things as we fee daily and know by certain Experience, we neither admire them, nor are we much moved to dive into their Causes, the very often more hid and obscure than the Causes of several other Effects, which, by Reason they seldom happen, entertain the studious Thoughts and Minds of the Learned. There is nothing more common than old Age, and the short Course of human Life is known to all; we drop insensibly, and that in few Years, from D 4

the height of our Youth, Vigour and Health, into a weak decrepit old Age, and no Man cares to explain the Causes and Reasons of this hasty, but inevitable Alteration.

They commonly give for a Reason, that our Bowels, and interior Parts, decay by Degrees and infenfibly, and that they do not execute well their Functions, in digesting the Food, in separating and distributing it, and in converting it into Blood, and nutritive Succus; from whence follows by little and little the weakness and ruin of the whole Body. I willingly allow all this, and that the Bowels and interior Parts of our Bodies decay insensibly; but the Queftion is, why, how, and by what Caufe or Causes? Not by themselves, for our interior Parts do not destroy one another. neither is there good Aliment wanting now more than in our Youth, (as I suppose) to continue our Vigour and Strength, and to repair all Losses, either the weaken'd, or lost Particles; Wherefore fince the fame Causes are still extant, why do not the same Effects follow? Why do not our Bodies perpetually continue in the fame Strength, like Fire, whilst it has Fewel? Or like a Lamp which still gives Light with the same Strength and Vigour, whilft fupply'd

fupply'd with Oil? Provided it be preferv'd from Wind and other external Injuries. You will fay, perhaps, that it is not the same thing to speak of an Organical Body, and diverfly composed, such as the human Body is, as it is to speak of a Lamp, or Fire, where there is no diversity of Parts, or of Operations. In each human Body there are innumerable Parts and Organs, and so joined together, that if one fails all the rest are endamaged by it, and confequently the Ruin of the whole Body follows. Wherefore it is more difficult for an Organical Body, than for any Lamp, to keep for a long Time the same State, or preserve itself unchanged.

But if you consider well the Matter, you will find the fame Reason runs equally for both Bodies, more or less composed; and that the Variety of Parts and Organs in one, more than in the other, fignifies nothing: For we suppose the Parts of this Body, or Machine, (whether more or less composed) to be now all entire, lively, active, and well ordered; we fuppose likewise all Nourishment required for the Preservation of these Parts in the fame State and Condition, that is, in the fame Integrity, Vigour, and Order, to be fub-

fubministrated, as well as before : and confequently it fignifies nothing, whether these Parts be many, or few, ten, or a hundred, or a thousand, provided the Strength and Proportion of Causes do still answer their Number. So if we supposed a Lamp to have many Branches, and Channels, of which each should be filled with a particular, and different fort of Oil, and that these Oils should be mixed together confusedly in one common Receptacle, out of which each Oil (either by Reason of the Diversity of their Weight, or by reason of the Diversity of the Branches and Channels, through which they pass) should by Necessity run through that Branch, or Channel, to which it was deftinated; This Lamp (we have feen some of the Sort) tho' composed of feveral Parts. would no less burn conftantly than any fimple Lamp, provided it were still supplied with the faid different Oils. Take another Example of a more composed Machine, to wit, a Water-Mill: Let the Water of this Mill represent the Nourishment and Humours of human Bodies : and let the folid Parts of the fame Mill represent the folid Parts of our Bodies: Now if this Mill had the Faculties and Vertue of repairing all its worn, decay'd,

cay'd, and lost Parts, whether the Wheel, the Stones, the Beams, the Coggs and Pins, or whatever part elfe, do you think if it had always Water, but it would perpetually keep a-going. The fame thing may be faid of a Clock, or Watch, or whatever Machine you please, if we suppose it to have the Faculty or Vertue of repairing its worn, or lost Parts. And fince it is manifest that artificial Machines would last for many Ages, and would still continue their Motions after the same Manner, if they had the Vertue and Faculty of nourishing themselves, and still repairing their Losses: and since it is also certain that natural Machines (fuch as our Bodies are) when they are in Strength and Vigour, have the Faculty of nourishing themselves, and repairing their Losses, the Consequence is, that they should continue for many Ages in the same State and Condition, if no external Impediment would hinder, or that wou'd by Degrees, or insensibly diminish and weaken that Vertue, or Faculty, either by weakning the Strength of the Organs which prepares the Aliment, or by altering the Disposition of Parts which receive the Aliment.

Neither is it to be admired, that the Motions and Actions of the exterior World should

should weaken, and work more upon such natural Machines, and do greater Damage to them, than any artificial one; for the Matter and Parts of natural Machines being always tender and foft, especially the Entrails and inward Organs, and the artificial Machines being always hard and stiff, it is plain that the Intemperateness, the Alterations, and the Irregularities of the Climate and Air must have greater Influence and Power over natural than artificial Machines, and that not so much by destroying their Parts entitatively, as by perverting and altering the Form of the Entrails, and inward Parts, inasmuch as they are Organs. It is well known by long Experience that the Constitution of natural Bodies, and especially the proper Disposition and Actions of all Tonick Bodies, preferve themselves the longer when they fubfist in the same Medium, (as they call it) than when exposed to divers Mediums. or even to the same Medium often changed in Quality and Temperature. I understand by a Tone here, a certain Disposition of the inwards Parts of our Bodies to certain Motions proper to them; and a Tonick Body, I call fuch as has its Parts in fuch a Disposition: Now since the Air which furrounds us, and which we breath, becomes

comes from being dry, to be moist, or from being moift to be dry; from Heat to Cold, or from Cold to Heat, and fuch other Alterations, to which our Bodies are subject, whilst we breath this Air, it is the fame thing as if our Bodies had fo often changed the Medium, and had endured the contrary Actions and Effects of divers Mediums; and confequently our Bodies cannot long subfift under the Alterations of fuch different Mediums.

These external Agents therefore, to wit, the Motions and Actions of the Weather and Air, are the true Causes of the Length or Shortness of human Life; for the more temperate and equal they are, and the more like themselves, the less human Bodies are altered by them; and the more intemperate, unequal, and unlike themselves they are, the more they weaken and pervert both the Tonick and Active Disposition of animal Bodies, as also their nutritive Disposition, or that by means of which they are capable of more, or less Nourishment, and at length they interrupt and corrupt their whole natural Constitutions: these are without doubt the greatest Enemies of a long Life, which daily weaken and destroy our Bodies, which tacitly gnaw the vital Habit and Form of all animated Machines, which

which pervert the proper Contexture of the Parts, and insensibly dissolve the whole; from whence proceeds that all Motions and Actions necessary for the Occonomy of the Body, languish by degrees, and at length Life departs it. To these Causes we ascribe the shortness of our Days, for they entirely influence our Bodies, to whose Laws and Power we are so miferably subject, that naturally we cannot attain to the Age of the old Patriarchs before the Deluge. Wherefore I conclude, if this terrestrial Globe on which we live, was before the Deluge, and fince the Creation, of the same Shape, outward Face and Form, and with the fame Alteration of Seasons and Weather, as our Adversaries think, then the long Age of Men before the Deluge, could not naturally be possible, having had the same outward and natural Causes to shorten their Days, as we now have.

You may fay we take a great deal of Pains in shewing the Reason and Causes of the shortness of our Age, in regard to those before the Deluge; but we might well spare the Labour: For none of the Antediluvian Patriarchs lived longer than we now do, and several of them lived a great deal less. When Holy Scripture says, that

that they lived so many hundred Years, we must by that understand Months, or Lunar Years; so when we read, Gen. 4. v. 17. That Methuselab lived nine hundred and fixty-nine Years, the meaning is, that he lived nine hundred and fixty-nine Months, which make but eighty Solar Years, and some Months; and it is certain that many in our own Days live

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This rash Interpretation of Scripture has no other Grounds, but that its Authors thought it altogether incredible that Men, either after, or before the Deluge, could live fo many hundred Years. Yet not only Moses, but several prophane Authors, allow the Antediluvians to have lived fo many hundreds of Solar Years: Tosephus Lib. 4. Hist. Speaking of this long Life of the Antediluvians, fays, I bave as Witness of this Truth all those that ever wrote among the Grecians and Barbarians, for Manethus who wrote the Egyptian History, and Berosus who wrote the Chaldean, and Molus, or Mochus and Hesticus, and Hierome the Egyptian, and all those that wrote of the Phanician Monuments, do attest this Truth. Also Hesiodus, Hecateus, Hellanicus, Acufilaus, **Ephorus** 

Ephorus also and Nicholaus assert that the antient (Antediluvians) lived a thousand Years. Besides, that Complaint of the old Patriarch Jacob, after the Deluge, concerning the Shortness of his own Life. Gen. xlvii. v. 9. The Days of the Pilgrimage of my Life, are an bundred and thirty Years: Few and evil, and have not attain'd unto the Days of my Fathers, in which they were Pilgrims, evidently shew the long Age of the Antediluvians in Comparison to ours; and that their years were not Months, nor to be reduced to the short Measure of that fictitious Calculation. Moreover we have several Reasons for not approving of that rash Interpretation: First, it is well known that Moses made use of the Solar, or the great Lunar Year, which he composed of so many Months. as we have now in use; for he says in the History of the Deluge, Gen. vii. v. 11. That the Water overflowed the Earth, in the fix bundredth Year of the Life of Noah. in the second Month, and in the seventeenth Day of the Month; where you fee that Years, Months, and Days, are distinguished. And in Chap. viii. v. 3. He fays, that after the end of One hundred and fifty Days, the Waters were abated, which notably

hotably happened before the Twentyfeventh Day of the feventh Month; for it was on that Day that the Ark rested on the Mountains of Armenia: Therefore there pass'd One hundred and fifty Days between the feventeenth Day of the fecond Month of this Mosaical Year. when the Waters first overflow'd the Earth, and the Time they began to decrease, which was in the feventh Month, and about the seventeenth Day of that Month, for in ten Days after the Water notably decreased, to wit, the Twenty seventh Day of the faid seventh Month, when the Ark rested on the aforesaid Mountains. And fince there are five Months betwixt the fecond and the feventh Month, beginning from the seventeenth Day of the second Month, and ending on the seventeenth Day of the feventh Month, or thereabouts, and that Moses numbers One hundred and fifty Days betwixt the aforefaid two Days of the second and seventh Month, it is evident that he affigned thirty Days, or thereabouts to each Month, and that he made up his Year of fuch Months. Moreover Moses numbers ten Months expresly in his Year, when he E ם מימוגל

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fays in the same Eighth Chap. v. 5. That the Waters were decreasing until the tenth Month; and afterwards, v. 6. 10 and 12. he numbers Fifty-four Days more, in which Noah expected, and tried whether the Earth was entirely dry, unto the first Month of the following Year. From which it plainly appears that Moses did not understand, or make use of Lunar Years, but of our Solar, or other like equivalent Years.

Secondly, When Mojes speaks of Noab's Posterity, and of the Progeny of Sem, Gen. xi. v. 10. if he understood by their Years the aforesaid monthly Years, it would follow, that several of the antient Fathers died either of an immature Death, or the natural Length of their Life was miferably fhort; as not reaching to the twentieth Year: For Nachor (not to speak of the rest) wou'd not live according to that Computation, much above twelve Years; for Moses says, Gen. xi. v. 24 and 24. That he lived in all but One hundred and forty eight Years. Likewise Abraham, who is said to have lived One hundred and feventy five Years, Gen. xxv. v. 7. would not live much above fifteen Years; and notwithstanding it is faid of him in the faid twenty fifth Chap. of Gen. v. 8. That be died in a good old

old Age, baving lived a long Time, and being full of Days. What a ridiculous Expression would this be, if he had lived but fifteen or fixteen Years? And fince none of these antient Fathers (according to this groundless Interpretation) ever attained to the fiftieth Year of Age; nor any of the Progeny of Adam, as appears by Gen. Chap. v. much above the eightieth Year, nor even Methuselab himself; how could the old Patriarch Jacob (as we noted before) complain of the Shortness of his Life? Or how could his Words be true, when he told King Pharaob of Egypt, that the Days of the Pilgrimage of his Life were One hundred and thirty Years, few, and evil, and that he did not come to the Days of his Forefathers?

Thirdly and lastly, what could be more absurd, than what manifestly follows out of this groundless Interpretation? To wit, that Nachor had Children, and begot Thare, when he was but two Years and five Months old; for the Holy Text fays, Gen. xi. v. 24. That Nachor lived Twenty nine Years, and begot Thare. And after the same Manner, the rest of the antient Fathers, at the time that the Children of ouf

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our Age can scarce speak or walk, would be ripe in Years, and with their little Wives of the same, or less Age, to wit, two or three Year old, would get Children: The Probability of which, I leave to the Reader's Consideration.

Pregery of Alber, as appear by Gar, Chop, v. much above the eightieth Year, nor even Marhy/Mab himfolf; how could the old Patriarch Marsh (as we noted before) complain of the Shortant's of his Life! Or how could his Work be true, when he told King Phora v of Egypt, that the Days of the Phora v of Egypt, his I lie were One hundred and thirty Years, flery, and ovil, and that he did not come to the Days of the Forefa.

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or European of the Land. So that there It wou'd not be suitable to Divine Providence and God's infinite Goodness, to have created this terrestrial Globe in the Beginning as we now find it.

OCTOR Burnet in his Telluris Theoria Sacra, lib. 1. Chap. 10, confidering both inwardly and outwardly this terrestrial Globe on which we live, and finding it to be very small in its Bulk and Extent, very rude and rugged in its Form; and on the other fide confidering the immense Power of God who created this Earth, as also his infinite Wisdom and Goodness, would not perswade himself but that God had created another World, or Earth for Men to live in, besides this prefent World or Globe : For faid he, it is required by all learned Men, that this earthly Globe is but like a Punctum, if compared to the whole Universe; and the half of this same Punctum is taken up by the Ocean, and Seas; and of the other half which remains, a great Part is taken up by Mountains; another Part by Defarts, and Wilderneffes; and another by Lakes, Marshes, &c. and another by Woods,

Woods, Forests, and inhospitable Regions, by reason of their extream Cold or Heat, or Barrenness of the Land. So that there is hardly half of this Terra Firma left for Men to be commodiously inhabited: A small Patrimony, truly, for Mankind, to be left Heirs of the fourth Part of a Punctum. Moreover considering that this Earth on which we live, is of fuch a neglected, and disordered Form, and in all manner of Ways incommodious, he could not believe that Providence employed all her Labour and Work in making fuch a rude, rough, and undigested Piece, but must have created other Worlds for Men to live in happily. Only poor Men use to build small and fordid Cottages; and the less a King's Palace is, the more nice, neat, and elegant, it should be; for it is very disagreeable that any thing should be superfluous, disordered, or incommodious in a small Palace built by an omniscient, and omnipotent Monarch for his own Children, as it happens in this Earth, which being small, is also rude, and in its Exiguity there are many things superfluous, many incommodious, unprofitable, and altogether inconvenient. Wherefore he thinks that all the Planets, the Moon, Venus, Mercury, Mars, Jupiter, and Saturn

seas, Plains and Mountains, Woods and Boggs, &c. with their Inhabitants, as this Earth has.

I could freely allow Dr. Burnet, that this terrestrial Globe as it now appears, is not the first and immediate Work of the Hands of the Almighty, confidering its outward Face, Shape, and Form, as a thing not fuitable to his immense Power, and infinite Goodness, being such an irregular, difordered, and incommodious Piece, as hereafter more at large, But to fay that God created other Worlds, and other Men, in the Moon and the rest of the Planets, is more than I have reason to believe, or he to perswade; for fuch Affertions are neither grounded on Experiments, Reason, or Authority, and consequently not to be believed, but rather rejected as rash and unadvised Positions. Moreover it is impossible that People could live in them Planets, either by reason of extraordinary Heat, or of extraordinary Cold; for the Planets next the Sun, as Mercury, Venus, and the Moon, are extraordinary hot; and the Planets farthest from the Sun are extraordinary cold, as Jupiter and Saturn. The Sun is for fourteen or fifteen Days entirely bittow

## 36 The Antedition World, &c.

just over the Hemisphere of the Moon, neither does the Moon retire more than five Degrees from the Eclyptick; how then could the Plants and Animals, avoid being burnt to Ashes? Or, how could they do for want of Water, which by Necesfity should all vanish into Vapours, by reason of the said Heat. And as for the Planet Mercury, it is allow'd by all modern Astronomers to be the next to the Sun, and truly so near, that for the most part it lies hidden from our Eyes in the Sun-beams, being swallowed up by that immense Light and Heat; neither is it ever distant from the Sun above twentyeight Degrees, and in about three Months Time, it revolves about the Sun. How then could Men, or Beafts live there? It is allowed by our Astronomers that the Heat of the Sun is seven times greater in the Orb of Mercury, than it is with us on Earth in the height of Summer, even when the Sun is perpendicular to us; but it is certain that, that Heat, feven times greater than our full Summer's Heat, would roaft, nay burn in a very fhort time any combustible matter; for the Instrument called Thermometrum plainly demonstrates that Heat seven times greater than ours in Summer-time, would

would make any Water boil in a few Minutes. From whence also follows, that no Water could be in the Orb of Mercury, for it would all foon vanish in Vapours. Likewise the Planet Venus, tho' it be farther from the Sun than Mercury, yet it is a great deal nearer to it than the Moon, and circulates round about it in about feven Months and a half: how then can it be possible that any human Creature should live there? and as for the Planets which are most remote from the Sun, it is also impossible for Men to live there by reason of the great Cold. According to the Observations of D. Cassine, and other Astronomers, the Earth is distant from the Sun 86265212 Miles; and according to the Observations of Christianus Huiigenius and others, the Planet Saturn is distant from the same Sun 956759624 Miles: So that Saturn is farther from the Sun, than this Earth by 870494412 Miles. From whence follows, that Saturn is more than ten times farther from the Sun than our Earth is: and confequently that the Orb of Saturn is ten times colder than this Earth is in the dead of Winter: But the Thermometrum demonstrates that Cold not only ten, but even seven times greater than ours

ours in Winter would congeal in a very short time all moist, or fluid Substances: therefore it would be impossible for Men, or Beafts to live in the Orb of Saturn. And as the Water would all foon vanish into Vapours in the Orb of Mercury, by reason of the Heat; so in the Orb of Saturn it would all be turned into eternal Ice by reason of the Cold. In short I might reasonably ask the Question, whether or no, those people of the Planets be descended from Adam? If not, then they did not fin in Adam; for none finn'd in him, but fuch as were carnally propagated from him; and then the Apostle's Words, Rom. 5. v. 12. all Men sinn'd in Adam, would be false. If they descended from Adam by natural Propagation, and that they finned in him, then they, or their Forefathers, must have been for some time on this our Earth, where they were begot; and then the Question is, why, how, and when did they with their Wives go up to the Moon, and other Planets? did Christ suffer for them, or not? who preached the Gospel to them? but enough of this illgrounded Opinion.

As to what Doctor Burnet said in favour of this planetary Fancy, I confess this

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Earth to be like a Punctum in regard to the whole Universe, and that the fourth part of it is hardly inhabited, or inhabitable; yet this same fourth part being large enough, and a sufficient Patrimony for all Mankind to inhabit therein commodiously, if they pleased, during their Lives, (they being only Pilgrims on Earth, and Travellers) there is no reason why God should create a larger Earth, and much less another World, unless you first prove that he decreed to create much more Men, than are, or will descend from Adam, and their Number so great, that this Earth could not, either at once, or fucceffively contain them; which you will find a very hard Task to do.

'Tis true that this terrestrial Globe is of a neglected and disordered Form, and very incommodious, and that it did not become Divine Providence, and God's infinite Wisdom and Goodness, to employ all his Labour and Work, in making such a rude, rough, and indigested Piece; yet it does not follow hence, that God must have created other Worlds for Men to live in happily; (unless you understand the World to come, and the Kingdom of Heaven) but the Consequence is at

the utmost, that this terrestrial Globe, as we now find it, and under its pre-fent Shape, Form, and outward Face, rough, rugged, difordered, and incommodious, did not immediately proceed as fuch, from the Hands of the Almighty, but that in the Beginning it was created by him fully perfect, and well ordered in its own kind, as well touching its Materia, as touching the Form, Qualities, and Conditions of that Materia, as well concerning the Weather, Air, and Seafons, as concerning the whole Body of the Earth, and that he allow'd its Inhabitants most commodious and paradisia-cal Seats, to live happily, if they pleased to continue in the Observance of his Divine Commandments; fo that the small Palace which the great King of Heaven made for Men, his Children, was very nice, neat, and elegant, nothing being there fuperfluous, nothing incommodious, And I do confess thas such was this terrestrial Globe, when first framed, and newly left the Hands of God: but it degenerated afterwards, when Mankind degenerated from God's Laws, and the Fault to be ascribed to Man and not to God, whose infinite Wisdom, Goodness, and Mercy, we should admire in order-

ing and disposing the Relicks, Ruins, and Rubbish of the Antediluvian World, so, that Mankind (notwithstanding their Sins) might have Habitations therein, and a

new World appear.

Wherefore my Opinion is, that it would not be fuitable to God's great Providence and infinite Goodness, if this terrestrial Globe were created from the Beginning, as we now find it, under the same Shape and outward Form; for, as fuch, it is a rough, rugged, difordered, and incommodious Piece, superfluous in several Parts, and confused in the main; and it is very unbecoming, and reproachful in a small princely Palace, to be furnished with Superfluity and Confusion, which must reflect on the Prince himself. The half of this terrestrial Globe is overflown with the Ocean and Seas, and as far as I understand, for the most part unprofitable; for half that Water, nay, the third Part, if brought through and round the whole Earth, in well ordered Channels, and fitted for Rivers, would be much more convenient for the Ornament of the Earth, for the Profit of Commerce, and more ferviceable for all human Uses. Likewise, if any Man would ask, what Necessity, what Service, what Profit is there for fuch, and

and so many huge Mountains on the face of the Earth? You will fay, perhaps, for the Sources of Rivers, for the Receptacle of Metals, Gold, Silver, Brass, Coals, &c. for to afford Quarries and Stones of all Sorts, &c. But if you fearch all, of fo many thousands of Mountains, you will find but few that are any thing necessary, or serviceable for such Effects, and what do the rest signify? What do they avail Mankind? And if they were all razed away, what would be wanting to Nature, but huge fruitless Bulks, and unprofitable Burthens of the Earth? moreover, is it credible that the infinite Power, and Wifdom of God, would cause in this his little World, which he created only, for the use of Man, such Vacuities, so many Defarts and Wildernesses not inhabitable, fo many horrid, unpleasant, deformed, naked, and barren Places, and this all over fo many great Regions, and vast Tracts of Earth, where no mortal can fettle himself, or live even after the poorest manner? I fay, after the poorest Monner; for we cannot expect in those Places either Wine, Corn, or Flesh, no nor even Cloaths to cover our Nakedness; it would be much that Water, Crabs, Acorns, or some such wild Fruits could be found there :

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there: But neither can any of these be found; nothing is to be had, nothing to be feen, but dry Sands, great Rocks and Stones. In vain you would fearch for a Tree to be as a Mark in the high Road: you should make use of a Compass, as they do at Sea, if you defigned ever to come to your Journey's End, and carry all Necessaries along with you; such are the great Defarts of Afia, and especially of Libia, of the stony and fandy Arabia of Tartary, and feveral other Countries. Befides, how many Regions of this Earth inhabited where People scarcely have the Necessaries of Life; as well by reason of the Rigour and Severity of the Weather, as of the Barrenness of the Soil? So it is throughout all the frigid Zones; the Inhabitants are few, lean, rude and barbarous in their Manners, in their Inclinations and Dispositions, and in their way of living; if we can fay that such People live who breath nothing but foggy, thick, cloudy Air, gross Exhalations and Vapours; they are buried in Darkness, and tortured with the great Severity of Frost, Snow, Rain, and Storms for very long Winters, which the favage Beafts can hardly endure. And to speak of our own Europe, we see so many unwholesome

Lakes, fo many stinking Fens, and Marshes, fit for no use that I know, but rather very noxious to Mankind; they corrupt the Air, and engender feveral venomous Beafts. At least it cannot be denied, but Europe is also unprofitably taken up with feveral barren Mountains, uninhabitable Forests, Rocks and Heaths, befides fo many empty and unprofitable Caves, and Hollows, filled only with Filthiness, and noxious Animals, with fuch Vapours and Exhalations, that once kindled and fet on Fire or otherwise agitated, they shake even the Foundation of this Earth, and break to pieces this our Manfion Place, created and granted to us through the infinite goodness of God. And to say all in few Words, if we but look on the immense Quantity of Water which is on our Globe; on the Magnitude and Multitude of Mountains; on the Regions uninhabitable, by the Rigour and Intemperateness of the Air ; on the Defarts and barren Lands: on the boggy Marshes, and subterraneous Caverns, we must confess that the greatest Part of this our World is bestowed on the Fish, wild Beafts and Reptiles: And is it fit we should think this World of Fish, wild Beafts and poisonous Reptiles, to be the World created by God for the Use .of

of Man alone, and at his Disposal? For my part I think this very offensive to the Dignity both of God and Man. If it were the one only and fingular Work of God, in that kind, doubtless it should be perfect in that kind, and confequently void of all Imperfections, Diforders, Inconveniencies, Unprofitableness, and Superfluities, of which hitherto we have spoke, and be a commodious, happy, and paradifiacal Seat for Mortals to live in.

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From all this I conclude that it would not be fuitable to God's infinite Wisdom and Goodness, if this terrestrial Globe were created by him from the Beginning as we now find it; and confequently that this Globe had another Shape and Form, (the Muteria is still the same) when it first came from the Hands or God, and Nature, than now it has; which we shall shew in the following Chapter, and also how and when it changed its primitive Shape and Form,

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#### CHAP. V.

The outward Shape and Form of the Antediluvian Terrestrial Globe, was much different from what it now appears.

HITHERTO we have urged the four Difficulties which attend the common Opinion of such as think this terraqueous Globe to have been since the Beginning, of the same Shape and outward Form, as we now see it. Now I shall declare our own Opinion; and first will shew that the Shape and Form of the Antediluvian Globe in general was much different from what we now see it.

To prove this, I take the Words of the Apostle St. Peter in his second Epist. Chap. 3. v. 5. where he reprehends some impious Men, and Epicures (as they call them) who denied and laughed at the surface Judgment, and Destruction of this present World, foretold by Holy Scripture, making use of this Argument, since the time that the Fathers slept, all things do so persevere from the Beginning; that is to say, as they were in the Beginning: For they argued, that by Reason of

the Duration of this World, and of the unchanged State and Condition of things for many Ages past, even from the time of the Patriarchs, as also by Reason that no Ground, or fign of any future Change appeared as yet, there was really no fuch Change, or Alteration to be, and that the Heavens and Earth should never be confumed with Fire, as the Prophets and Apostles foretold. To which empty Reason St. Peter answers, that these Epicures were wilfully ignorant how the antient Heavens and Earth were so made and ordered, that by a peculiar Reason the antient World was exposed to a Deluge of Water, as effectually it perished by Water; and that the Heavens which now are, and the Earth, are kept in Store, referved to Fire, or to perish by Fire in the Day of Judgment; as if he had faid that this present terrestrial Globe is no less prepared and disposed to be consumed by Fire, than the antient terrestrial Globe was prepared to be overflown by Water, The Words of the Apostle in the aforesaid Place, v. 5, 6, 7. are these: They are wilfully ignorant of this, that the Heavens were before, and the Earth out of Water and through Water confisting by the Word of God; By which that World which was then,

then, being overflowed with Water, perished, but the Heavens which now are, and the Earth, are by the same Word kept in Store, reserved to Fire unto the Day of Judgment, and of the Perdition of impious Men. St. Augustine upon this Text fays, that the antient Heavens perished by the Deluge, by that understanding the aerial and meteorical, not the fyderical or starry Heavens; his Words, are these, lib. 3. de Gen. ad lit. cap. 2. We read in one of the Epistles which are called Canonical, that these aerial Heavens perished beretofore by the Deluge; for the Water which so increased, that it overflowed the Tops of the highest Mountains by fifteen Cubits, cou'd not come up to the Stars.

St. Peter by the aforesaid Words, manifestly infinuates the difference that is betwixt the natural Shape and Form of the old and new World, or of the Antediluvian and Postdiluvian Globe; by Reason of which difference the Antediluvian Earth was subject to be drowned, and Postdiluvian, or Hodiernal Earth to be burned, to wit, by Reason of the different Situation and Constitution of the one from the other. The Earth, says he, out of Water, and through Water confishing by the Word of God: By which (that is

to fay, by reason of which; or where-fore: For where our Latin Edition has per quæ, others read quomobrem, others, quapropter:) The World that was then, being overflowed with Water perished : plainly infinuating that the natural Cause or Occasion of the Deluge (God so ordaining) forung from the Form and Constitution of the Earth that was then. And fince we proved, Chap. 1. that the terrestrial Globe as now it appears, or under its present Form and Constitution, could not be overflown with Water, nor capable of being so overflown, as Scripture mentions, the Consequence is very plain to me, that the Apostle St. Peter speaks here of another Form which the Earth then had, far different from its present Form, by means of which it was capable of being overflown, and to perish by Water. Wherefore I argue thus out of the aforefaid Text: St. Peter manifestly distinguisheth the antient World from ours, or makes a difference betwixt the Antediluvian and the Hodiernal Earth; and that not only in regard of time, nor in regard of their divers Ends and Destiny, inasmuch as the one perished by Water, and the other shall perish by Fire; but chiefly in regard of their divers natural States,

Forms, and Qualifications of the Materia, the one being made out of Water and through Water, and fit to be overflown by a Deluge, and the other not: Therefore the outward Shape and Form of the antediluvian Earth was much different from its present Shape and Form; for St. Peter infinuates that the antediluvian Earth had fuch a Shape, Form and Constitution, which had a natural Aptitude and Fitness to be overflown by Water; but the Form and Constitution of this present terrestrial Globe has no fuch Aptitude, Fitness, or Capacity, as we faid, Chap. I. therefore the Shape and Form of the antediluvian Earth was much different from the Shape and Form of this postdiluvian Globe.

Moreover, St. Peter says, that the antediluvian World perished in the Deluge, that World, says he, which was then, being overflowed with Water perished; which is not to be understood, as if all Men only and Beasts of that World had perished, but also that its natural State, and outward Shape and Form perished likewise: As plainly appears by opposition to the suture Destruction of this present World by Fire, when not only Men and Beasts, but also the natural State and Form of this Earth shall perish; not truly in its Substance or Materia, but in its Form, outward Shape,

Contexture,

The Antediluvian World, &c. 71 Contexture, and Qualities; therefore the antediluvian Earth perished likewise in its Form, outward Shape, Contexture, and Qualities; and consequently it had a different Shape and Form from the present Earth. And truly it is but reasonable that the aforesaid Words of the Apostle should be understood of the natural State and Form of the antediluvian Earth, or at least so as not to exclude that State, fince the Objection of those Atheists with whom he disputes in the said Place was grounded on its natural State and Form; and if St. Peter had not meant that State and Form, he would not have answer'd their Objection to the Purpose. In fine if the Apostle had spoken there of the animated and human World only, he would doubtless have excepted Noab and his Family, with all the Animals he had along with him in the Ark, which in other Places he neglected not: Wherefore fince he makes no fuch Exception, he is to be understood of the natural State and Form of that Earth which perished by Water. Besides this solid Proof out of Scripture, for the truth of our Assertion, natural Reason also confirms the same: It is allowed by all Philosophers, and by Antiquity, both facred and profane, excepting Aristotle and some few Heathens more F 4 that

that followed, that this terrestrial Globe took its Beginning from a certain Chaos, called by Moses in his own Language Tobu Bohu, by which he understood a great loose and fluid Heap, or Mass of Matter, or a vast Quantity of substantial Particles, fome greater, some smaller, and of all Sorts and Figures floating together, without any Order, or Contexture, in a confused and undigested manner, which Mass of Matter, or fubstantial Particles, were created by God. But Aristotle impiously said, that this terrestrial Globe was from all Eternity, fo that from Eternity there were Men on Earth, Animals, Trees, Herbs, Seas, Mountains, Islands, &c. without Beginning; which is directly against Christian Faith, and natural Reason. Wherefore fuppoling this Doctrine to be false, and the contrary an Article of our Faith. out of the first Chap, of Gen. v. 1, where it is faid, that in the Beginning God created Heaven and Earth, I will only shew how this terrestrial Globe as it now appears, to wit, a terraqueous Globe full of Mountains, Valleys, Rocks, &c. could not take its Beginning from the aforefaid Chaos, or that confused and undigested Mass of Particles floating together without any Order; and the Reason is, forfor this great Mass, or heap of Particles being fluid, and the Nature of all fluid Bodies requiring that their fuperficial parts do still keep themselves in an equal distance from the Center, it is plain, that the faid confused fluid Mass would make up a Globe, whose Surface would be smooth, and equal, not cast up in Heaps, not funk down in Cavities, or Gulfs, not uneven with Hills and Valleys, not rough, and rugged with Rocks, and Mountains: for if one part of that Surface had been in the least higher than the other, it would immediately fall down by its own weight into the neighbouring Valleys, and come to a Level with the rest: thus we see it happens in the Sea, which being a fluid Mass, is still fmooth and equal in the Surface, when left to itself; it does not rise in fluid Mountains, neither does it fuffer any Caves, or Hollows in its Bowels unfilled: the fame, I fay, of the great Chaos, or primitive Sea, that by the same Laws of Nature, it should be as well full and folid inwardly, as equal and fmooth outwardly. But how far different from this is our present Earth? In its outward Face it is rough and uneven, either heap'd up in Mountains and Hills, or funk down in Valleys

Valleys or Depths: you shall find no where an Uniformity; here it is plain, there a gentle Ascent, in another place inaccessible Rocks, and Precipices, and every where of a different Situation: and as concerning its inward Parts and Bowels, it is full of Caverns and Vacuities, as if eaten or consumed away, all mixed with horrid Dens, and subterraneous Hollowness; not speaking of the huge Gulf of the Sea: therefore the terrestrial Globe when first made of the said Chaos, was of a far different Shape and Form from what

it now appears.

And to explain this a little better, (we

shall treat at large of it in the following Chapter) take notice, that at the first Motion and Separation of the Particles of the Chaos, the Particles of the Earth, being heavier, fell down to the Center, and made a solid Globe of Earth; and the particles of the Water, by reason of their Lightness, cover'd that Globe of Earth with an even Surface, being intirely fluid; in that Surface afterwards succeeded a certain Concretion, or thickening, and state of Consistency, (as we shall shew hereaster) which State, Form, or Shape to be the same, or like this our present Earth, is impossible: for that liquid

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Mass of Water and Earth mixt, when first separated (whether all the Particles of the Earth fell down to the Center, or whether some of them sunk to the Surface of the Water, or came from elfewhere, it is the fame thing) the earthly Region, or Surface which was made by that, fhould by necessity be plain, even, folid, equal, and entirely uniform; whilft of the other fide, we fee the Surface of our present Globe altogether irregular, and of many Shapes, with Seas, Earth, Mountains, Plains, Islands, Rocks and Caves: which Shape and Form, fince it could not have proceeded from the aforefaid fimple Disposition, and equal Situation of the Parts, or Particles, it follows by Nes ceffity that the first and primitive Form of the terrestrial Globe, was much different from its present Shape and Form.

You will fay perhaps, that truly the primitive Form, and outward Shape of this terrestrial Globe, after being made out of the Chaos, was as we faid plain, even and uniform, without Hills, or Mountains, by reason the Surface was sluid, and not yet condensed into Earth; but that soon after, and before the said Surface grew thick, solid and earthly, the terraqueous and mountainy Globe

was framed, and appeared above the Waters, by means of the strong Motion, huge Waves and continual Fluctuation of the Waters, which having made several great Sconces, Pits, Channels and Cavities in the spherical Mass of the subaqueous Earth, and the Water, or sluid Mass, which before entirely covered the Surface of this Earth, partly falling into the aforesaid Cavities, and partly being reduced to Vapours by the Heat of the Sun, the Earth appeared as we now see it.

I must confess this to be an ingenious Thought, but it will not do; for what Waves, what Surges, or Billows, what Fluctuations can we reasonably suppose to be in that primitive Ocean, or liquid Mass? What incredible Force and Violence of Water would be necessary to make hallow the Earth underneath, whose maffy Bulk was then entire, all in one piece, confolidated together, even by the weight of the overflowing Water? Or what could be the Cause of such a violent Motion of the Water? Not any Wind, not any Storm; for then the Surface of the Globe being plain, equal, and levell'd, there could be no Storms, no Winds, besides the general and regular Winds,

Winds, which follow the Motion of the Sun or Earth, and which are never vi-

olent, never unequal.

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Moreover the Motion and Agitation of Waves which we fee in our Ocean, neyer reaches the bottom, especially in the deepest Places, neither has it any Effect but in shallow Places alone, or near the Shore, where the running Waves meeting with Refistance, are stopt; but in that huge Ocean of the great Abyss or Depth, there were no shallow Places, no Rocks, no refistance of Banks, or Shores, but the whole Orb of Water boundless, without Coast, or end: how then cou'd any Motion of the Water cause such Effects in the subaqueous Earth? In short allowing gratis that fome Valleys, or Hallownesses might have been made in the subaqueous Earth by fome, I know not what, Fluctuation, or Agitation of the superincumbent Water, (tho' in all Reason the Surface of that Earth should rather be polish'd by it, and made smooth and equally round) so that some parts of the bottom might have been made lower than others; what is this I pray in regard of the immense Depth and Cavities of the Ocean, in regard of the Height and vast greatness

ness of the Mountains? If we but consider the exceeding Hugeness of each of them, and well understand the distance which is from the Top of the highest Mountains, to the lowest bottom of the main Ocean, we shall never be perswaded, that fuch wide and deep Gapings, or Cavities could have been formed in the Body of the subaqueous Earth, by such weak and disproportioned Causes, as the aforesaid Motions and Fluctuations of the primitive Waters were. 'Tis true that the flowing of our Seas and Rivers, make fometimes small Hillocks, and fandy Banks; but these are much different, and of a quite other Nature from those ancient primigenial Mountains: they are not great, nor high; they are not rough, nor craggy; they are not pointed, or sharp in their tops, like Sugar Loaves, nor compacted of folid Rocks; and if the violent and constant flowing of our Seas for fo many thousand Years, can produce no more than fuch fandy Banks, and foft inconfiderable Hillocks, is it credible that the flow and weak Motion of the primigenial Abyss, could in such a short time throw up such great, high, craggy, and folid Mountains, as we fee

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now on Earth? And as this seems clear, so it seems likewise plain, that the Shape and outward Form of the antediluvian World, was much different from the Shape and Form of our present postdiluvian terraqueous Globe.

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## CHAP. VI.

What the Shape and Form of the Antediluvian terrestrial Globe was.

TAVING shew'd in the precedent Chapter, that the Form and outward Shape of the first and Antediluvian Earth, was much different from the prefent Face and Form of our terrestrial Globe, here we shall declare what Form, or Shape in Specie was that of the Antediluvian World. Which the better to perform, let us place before our Eyes that primigenial Chaos, which we described in the former Chapter, to wit, a great loofe and fluid Mass of substantial Particles, of which some are greater, some smaller, fome round, fome fquare, fome oval, fome triangular, fome cylindrical, fome fhort, fome long, fome rough, fome smooth, and of all forts of Figures, such as you fee here for Example; tho' they be nothing comparable to the primigenial Particles.

Figure I.

The Primigenial Chaos, or Tohu Bohu



In this confused and undigested heap of Particles, Atoms, and inconstant Concretions, it is reasonable we should think, that the biggest, the most gross, heavier, and solid Particles, or little Concretions, should immediately drop down to the Genter

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Center by their own Weight, where being more and more pressed together, and growing hard, they make up the centrical Earth, or its inward Parts; the rest of that undigested Mass which remains floating up, and at the Surface, must necessarily be divided into two Orders, or Degrees of Bodies, the one liquid, the other volatile, or into Water and Air; for the smallest and lightest Particles still going upwards from the Center, and being agitated here and there by a perpetual Motion, or endeavouring to it, they make up the Regions of the Air; as the Particles that are not fo fmall, light, and moveable, but in a Mediocrity, make up the whole Mass of liquids: and then the whole Globe will be of that Form and Shape which you fee in this fecond Figure.

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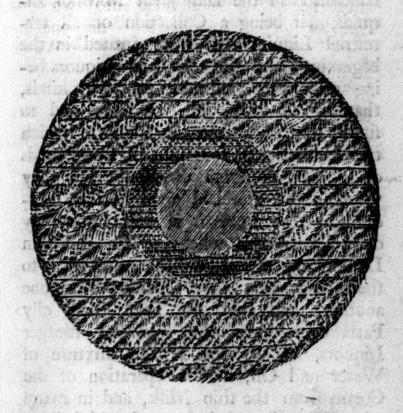
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## Listenes belief Figure II. Programming

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The great Chaos reduced to the Inward Earth, Water, and gross Air.



And hitherto I see no Difficulty in the Matter, since all go according to the Laws of Nature, and allowed by our Adversaries.

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Neither is it hard to understand another certain fort of Separation, which happen'd betwixt the Parts and Particles of the aforefaid Mass of Liquids, and which by Neceffity must follow the first, for all forts of terrestrial Liquors or Fluids, being contained in the faid great Mass of Liquids, (it being a Collection of all terrestrial Liquids that were created in the beginning) and the terrestrial Liquors being principally reduced to two kinds, that is, to gross, fat, or oily, and to fmall, thin, and meager Liquors; which two kinds being found in all Compounds of Liquids, no Man can doubt but they were in the aforesaid great Mass of Li-And fince it is well known by daily Experience, whenever fat and thin Liquors are mixed together, and left to themselves, that they separate from one another, and that the thick and oily Parts over-fwims the thin and meager Liquors, as we fee in the mixture of Water and Oil, in the Separation of the Cream from the thin Milk, and in many other Examples; it is fit we should believe that the aforesaid great Mass of Liquids separated itself in two several Parts, to wit, into the fat and oily, and into the thin and meager, the former over-fwimming the later.

So that now we have the whole Globe, or primigenial Mass of the great Chaos, divided into four parts, as you see in the following third Figure, where the inward Globe, or Circle about the Center represents the inward Earth, the second Circle represents the Water, or thin and meagre Liquors, and the third the sat and oily Liquors swimming over the Water. The other great Space up to the highest Circle represents the whole Body of the Air, thick and dark as yet, not purg'd or purified; which happened soon after, as we shall now declare; but first take the third Figure.

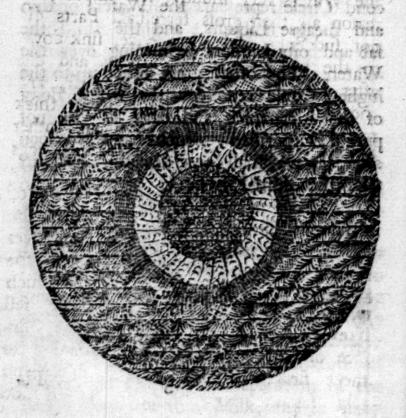
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Soperation of which hitherto, appened in a few angenerics and rein a few time, yet, angenerics and repurity and purificulty the Africand

## Figure III.

The great Chaos reduced to the inward Earth, Water, Slime, and gross Air.



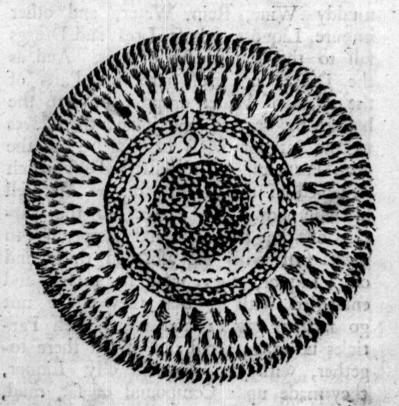
Tho' we think all these Changes and Separations, of which hitherto, happened in a short time, yet longer time was required to purge and purishe the Air, and

the Water, and reduce them to that Clearness, and Brightness, which they had afterwards. We must consider the Air yet very gross, thick and dark, so that it could give no Paffage to the Sunbeams; and likewise, we must consider the Waters very muddy, and impure, by reason all their gross terrestrial Parts did not fuddenly, and all at once, fink down to the bottom, but by degrees, and one after another, the most gross first, and the rest after; as we see done in thick muddy Wine, Rain, Water, and other impure Liquors, whose Lees and Dreggs fall to the bottom by degrees. And as the Dregs, or gross terrestrial Parts of the Mass of Water dropp'd down to the bottom by degrees, and joined themselves to the interior Mass of Earth; so the gross Particles, and terrestrial Dust which remained in the Regions of the Air, fell likewise down by degrees to the Surface of the Liquids, and happening to meet first with the aforesaid thick and oily Liquor, they were fo mixed and entangled with it, that they could not go farther down: and many such Particles being gathered and mixed there together, with the aforesaid oily Liquor, they made up a Compound of fat, mud,

or slime, or rather muddy Earth, which inclosed and wrap'd up in its Bowels the whole Mass of liquids, (which hereafter we shall call by the Name of the great Abyss) as you see in the following Figure.

#### Figure IV.

The great Chaos reduced to the inward Earth, Water, muddy Earth, and thin Air.



The Figure 3. represents the inward. or subabyssian Earth; The Figure 2. represents the Water, or great Abyss: The Figure 1. represents the muddy, or superabyffian Earth; and the rest represents all the divers Regions of the Air, not as yet entirely clear, but somewhat brighter than it was before.

The faid muddy, fat Slime, oily Mortar, 1. which now we begin to call the fuperabyffian Earth, was the first Concretion, the first Thickning, the first dry Land, the first firm and solid Mass, which covered the whole Surface of the Waters. or great Abyss; and the same being afterwards increased, and reduced to more Solidity and Firmness, made up the primigenial dry Land, and the first habitable Globe, which we call Earth.

You may fay that the aforesaid few gross Particles, and terrestrial Dust, which remained in the Air, however collected and heaped together in the upper Surface of the Mass of Liquids, were not so many that might make up the whole Region of that firm, folid, and habitable Earth. But who foever will confider the Greatness and vast Capacity of the Regions of the Air, in comparison to the small compass of the Earth, can have no Difficulty in

the Matter; for fince the Regions of the Air are innumerable times greater than the Compass of the Earth, tho' the Relicks of the gross terrestrial Parts were only dispers'd and scattered here and there throughout that vast Capacity, notwithstanding when all are gathered and heaped together on the Surface of a much less Sphere, they can make up a Body fufficiently gross and solid that may reprefent the first habitable Earth. We see fometimes this Earth in a short time covered with Snow, two or three Foot deep, falling only from the fecond Region of the Air: Confider then, if the terrestrial Particles and Dust, continued to fall for a long Time, not only from the fecond Region, but also from the whole immense Capacity, and boundless compass of all the Regions of the Air, would they not make up a Region of a folid terrestrial Substance, thousands of times greater and deeper than the aforefaid Snow? And when besides increased by their joining the aforesaid fat and oily Mass of Liquids, with which they are incorporated, or mingled after their Descent, doubtless nothing can be wanting to them, either in Quantity or Quality, to make up that primæval Earth, which could not but have that

that Shape and Form, or much like it, which you see in the following Fifth Figure, where you see all the Regions of the Air clear, and bright, for all the terrestrial Particles and Dust which before were mixed with the Air, sell down to the Surface of the superabyssian Earth, as was said before.

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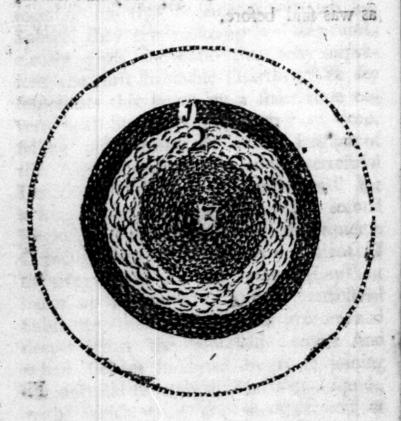
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Figure V.

The great Chaos reduced to a clear and bright Air, superabyssian Earth, the great Abyss, and the Subabyssian Earth.

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By all these Motions and successive Transformations of the Chaos, which according

to the Laws of Nature it could not but undergo, it feems plain that the first external Concretion, firm and permanent Form happened in the Surface of the great Abyss, or Mass of Liquids, by means of a certain Mud, or Slime, or oily Mortar gathered there together, and mixed with the dusty Particles, or small terrestrial Corpufcles falling from the great Regions of the Air, as we have faid before; whose Parts in Progress of Time, were more and more united and closed together, fo that at length the whole Mass by the heat of the Sun, and mild Motions of the Air, grew fo hard and firm that it became a Region of folid and habitable Earth.

Hypothesis does agree with holy Scripture and natural Reason: three remarkable Places I find in holy Writ, which most solemnly speaks of the Foundation and Form of the Earth; the first is that samous Place of St. Peter, 2 Epist. chap. 3. v. 5, 6, and 7. which we urged, Chap. 5. where the Apostle says, that the Earth in the Beginning consisted and was made out of Water, and through Water; out of Water, as its material Principle;

Principle; and through Water, as its infrumental Cause, sustaining and upholding the said Earth: but certain it is, that both these Expressions of the Apostle fully agree with our Hypothesis; for we compose, and make up the Earth out of Water, and we ground and settle it upon the Waters: therefore our Hypothesis fully agrees with the Apostle's Words,

Moreover, St. Peter in the aforesaid Place affigns a difference betwixt the old Earth and the new one, that the old Earth was so made up, that it was entirely obnoxious, to an universal Deluge, and the new Earth to be confumed by Fire: his Words are these, The Heavens were before, and the Earth, out of Water, and through Water confisting by the Word of God; by which (by reason of which) the World that was then, being overflow'd with Water perished. But in our Hypothesis the only reason why the old primigenial Earth was subject, and exposed to an universal Deluge (as effectually it perished by Water) was, because it was made out of Water, and grounded upon Water, as we shall demonstrate hereafter: therefore our Hypothesis fully agrees with the Apostle's Words.

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The second place of Scripture is that of the xxxviii Chapter of Job, from the 4th Verse to the 11th. where the Almighty God puts these Questions to Job: Where were you when I laid the Foundations of the Earth—when the Morning Stars praised me together, and all the Sons of Gd made Jubilation? Who shut up the Sea with Doors, when it broke forth proceeding as it were out of the Womb; when I made a Cloud the Garment thereof, and wrapped it in Darkness as in Clouts of Infancy? (in a fwadling Band as others read) I compass'd it with my Bounds, and put Bars and Doors. The better to understand these Words, look back on the fifth Figure, where I. denotes the habitable Earth, or the first Circle, or Sphere, which furrounded the great Abyss like Clouts of Infancy, or a fwadling Band. The Figure 2. denotes the faid Abyss, or the great Mass of Waters, which in the aforefaid Text are called the Sea. And the Figure 3. denotes the inward, or fubabyffian Earth, lying in the Center, and cover'd all over with the Waters of the great Abyss. Now when God asketh Job, who shut up the Sea with Doors, when it broke forth proceeding as it were out of the Womb, nothing can be better under-

understood by the Sea, than the great antediluvian Abyss, represented by the Figure 2. or that famous Mosaical Thebom- Arubbah, Genef. 7. v. 11. which being broke affunder, or rather breaking forth, proceeding as it were out of the Womb, in time of the Deluge, afforded fuch immense Quantity of Water, that it overflowed the whole Earth; for Thebom fignifies a vast gulf of Water; and Arubbah great Pipes, or Windows, or Doors, through which Water rusheth furiously out. For the aforesaid Words of Job cannot be well understood of our Seas, without wresting. And when they say, that God made a Cloud the Garment of the said Sea, and wrapped it up in Darkness, as in a swadling Band; nothing is more fuitable to our Opinion: for by the Garment, and fwadling Band, the outward terrestrial Circle, or Sphere, which encompass'd the great Abyss before the Deluge, called by us the superabyssian Earth, denoted by Figure 1. may fully be understood: neither do I see any thing in, or about our Seas, which might anfwer the faid Garment, or fwadling Band. And in short, when they say, that this Garment, this swadling Band, or Clouts of Infancy were made of a Cloud, or dark

dark thick Air, nothing can be more properly said in our Hypothesis: for we say that the said Garment, swadling Band, or Clouts of Infancy, to wit, the superabyssian Earth surrounding and wrapping up the great Abyss, were made of the same matter, that is, of the gross, thick, cloudy Air, or rather of the Grounds and Dregs of the Air, as we have said above: therefore our Hypothesis sully agrees with the Words of Job.

The third Place of Scripture is, Prov. viii. from the 23d. to the 30th. Verse, where the increated Wisdom, speaking of the first Creation of this World, thus fays: from Eternity I was ordained, and of old before the Earth was made. The Abysses were not as yet, and I was now conceived; neither bad the Fountains of Waters as yet gushed forth, the Mountains with heavy Hugeness stood not as yet, before the little Hills I was brought forth. He had not yet made the Earth, and the Rivers, and the Poles of the Orb of the Earth. When be prepared the Heavens, I was present; when with a certain Law. and Circuit be compass'd the Abysses: when he established the Skies above, when be weighed the Fountains of Waters; when he compassed the Sea with Limits, H and albn

and fet a Law to the Waters that they Should not pass their bounds when he bung the Foundations of the Earth, &cc. All Men must confess there are some Periods in this Description of the Beginning and Formation of the Earth, written after an unufual Stile, and which feems contrary, or at least strange, to the common way of speaking, and even to the Thoughts of Men. The reason is because the matter here treated of, is not rightly understood by applying the faid Periods to the present Shape and Form of the Earth, and terraqueous Globe. But if some things here spoken, be referred to another Shape and Form of the Earth, which it had before the Deluge, and of which we speak in the present Chapter, the Text would be very plain, for example; when the increated Wisdom fays, she was conceived before all the Abysses, or Depths; if you understand the primigenial antediluvian Abyss, which was the Mother of all the reft, the thing is plain; likewise when it is said, that she was brought forth before the Mountains with beavy Hugeness stood, to wit, leaning upon the great Abyss; for where we read nec dum Montes gravi mole constiterant, the Mountains with heavy Hugeness THE STATE OF

ness stood not as yet. Others read out of the Hebrew, antequam Montes immerfi incumberent, before the Mountains being dipp'd, lean'd upon the Abyss : for we shall show hereafter, that the inferior parts of this Earth do stand dipp'd in the Waters of the great Abyss, and by means of them Parts, as by fo many Pillars, Props, or Supports, the Mountains with all this habitable Earth, are held up over the Waters. Finally, the faid increated Wisdom says, when he prepared the Heavens, I was present; when with a certain Law, and Circuit be compass'd the Abysses; others read, when he set a compass upon the Face of the Abysis Tor where the latin Edition has, quando berta lege et gyro vallabat Abyffos, they read, cum statueret gyrum in superficie Abysis that is to fay, in my Opinion, when with the Orb or Sphere of the solid Earth, he compass'd or environ'd the great Abyss. And what other things, I pray, can be understood by this Circuit, or Compass, or as the Hebrew Word calls it, Cingulum, a Girdle, and the Latin Word Gyrus, a Circuit, or Compals; by which God is faid to have environed the great Abyss? What can you find in the prefent Form, or Shape of this Earth, which H 2 453 may .

may answer it, or that with any Appearance of Truth, can be said to environ, or encompass the Seas, even in case you took them for the great Abyss mentioned in the aforesaid Text. For my part, I can considently say, that supposing our Hypothesis of the first framing of the terrestrial Globe, all the Texts of Scripture now mentioned, are much easier and more properly understood, and explained than in any other Supposition whatever.

And if we reason a little upon the matter, we shall find our Supposition to be true, or no Earth to be found for Man to live upon. At the first Motion, and Separation of the Parts and Particles of the great Chaos, or Mosaical Tohu Bobu, the whole Bulk of the Earth laid under Water, being covered all over by the great Abyss, as you see in the 2d. Figure, page 83, and this our Adversaries do allow. Now there wants a folid, firm, dry Mass, which we call Earth, for Men to live upon, being they could not live under the Waters on that subabyssian Earth, as such. Wherefore, we find a convenient Earth for them, which was made on the upper part, or Surface of the faid great Abyss, as is declared above in the 3d. and 4th. Figure, Page 86 and 88. but

but this our Adversaries deny, saying, there was no need of any fecond Earth, for that the Waters which covered all over the first subabyssian Earth, retired to one Place, and were called the Seas, leaving a great part of the faid fubabyffian Earth uncovered and dry, for Men to live upon, as now we fee. All which (they say Moses sufficiently infinuated, Genes. 1. v. 9. thus speaking of the work of the third Day, God also faid, let the Waters that are under the Heaven. be gathered together into one Place, and let the dry Land appear, and it was fo done, and God called the dry Land Earth, and the gathering of Waters together, he called Seas.

The Question therefore betwixt us and our Adversaries may reasonably be stated thus: What was that Earth which the sirst Men inhabited, whether the subabyssian, as our Adversaries say, or the superabyssian Earth, as we pretend? that it cou'd not be the subabyssian, I prove it thus: If our first Fathers inhabited the subabyssian Earth, or part of it, by necessity it should be first made dry, and habitable; but this did not happen: therefore they did not inhabit the subabyssian Earth. I prove the Minor; if the H 3

Subabyssian Earth had been made dry and habitable, then either the Waters which covered all over the subabyssian Earth, forfook it, retiring to one or more Places, or into Trenches, Ditches, hollow Passages, and Cavities, much after the same manner as we see Boggs, and overflown Land are drained; or the Earth forfook the Waters, by swelling and rifing up over them in fome Places, by which it shuffled off all the Waters where it fwell'd, and rifed fo, and became dry and habitable; just as they say, that fome new Islands never feen before. rose up out of the Sea, getting clear of the Water; as also, that some Mountains were thrusted up out of the Earth, never feen before. And according to this Second Supposition, the Bottom of our present Ocean remained still firm and unmoved from the Beginning, and as then it was, the Fields only and dry Land, which was fo, being moved out of their Places, and raised up over the Waters: According to the first Supposition, the Fields, Plains, and dry Land, remained still firm and unmoved, whilst the Waters fled into fome new Passages and Cavities, made in the folid Earth beneath to receive them. But the subabyssian Earth could not become

Earth is this Day, either of these two ways: Therefore the Earth which our Foresathers lived on before the Deluge; or on which we live this Day, was not part of the subabyssian Earth, but a quite different one, and such as we exhibited above, p. 86, 88, and 92. in the third, fourth, and fifth Figure, which we call

the fuperabyffian Earth.

Before I prove this last Minor, note that the Matter, or Substance of the fubabyssian Earth in itself, and in its Qualifications, could not be fufficient to make up any habitable Earth, either for Men, Beafts, or Vegetables, for the first habitable Earth by necessity ought to be fit for the Production and Nourishment of Plants and Animals, in as much as it was the fruitful Mother and Nurse of Men, Animals, and Plants: and confequently it should be made up of small, light, quick, lively, fat, and oily Particles, and full of Fibres; for fuch only are fit for the Production and Nourishment of human Bodies, Animals, and Plants; and where there are no fuch, no Animals, no Vegetables can be; but the folid Matter or Substance of the subabysfian Earth was composed of gross, heavy, deadish, HA barren.

barren, spiritless, dry, lean, meager and fiberless Particles, for such only, by the Laws of Nature could fall down to the Center in the first Motion and Separation of the great Chaos: therefore they could make up but an unfruitful, barren Soil, a dead spiritless Mass of course and rough Earth and Stones, and a most unfit Seminary and Nursery for the Procreation and Nourishment of Animals, and Vegetables. And certain it is, that no oily Substance (which according to all Philosophers is necessary for the Generation and Nourishment of Animals and Vegetables, and of which this Earth of ours with all its Furniture, both animaflical and vegetative, is full) could be in that subabyssian Earth, at least but very little; for the oily Particles being lighter, not only than the terrestrial, but also than the watry Particles, how could they contrary to the Laws of Nature. fall down to the bottom of the Abys, under the Waters, and there remain, efpecially having no Hinderance from taking their own Seat according to their proportion of weight or lightness. In a Word, the subabyffian Earth being much of the fame Nature with the Caput Mortuum, or Terra Damnata of our Chymists, it's evident

evident that it could not be a fit Nursery for Animals, or Vegetables. This Reason is ab intrinseco, and from the Nature of the things themselves, and therefore more to be valued.

Now to the Proof of the faid last Minor, to wit, that the subabyssian Earth could not become dry and habitable, either of the faid two Ways; for if we confider the outward Shape and Form of this our present terrestrial Globe, the Authors of the subabyssian Earth will find less ground for either of the faid Suppositions: And first, that Supposition which says that the subabyssian Earth forsook the Waters. by fwelling or rifing up over them in some Places, as being blown or thrusted upwards, and that fuch Parts fo thrusted up, getting clear of the Water, became dry and habitable, is naturally impossible: For it is impossible that the whole bulk of this dry Land, not only the Mountains and Hills, not only their Plains and deepest Valleys, but also all and whatever reacheth their lowest Roots, and deepest Bottoms, even to the greatest Profundity of the Ocean, could be thrown, or thrusted up from the great Mass of the subabyssian Earth. For besides that there is nothing in nature which cou'd be the

the Cause of such a swelling, rising or thrusting up of the Earth against its Nature; and to return to God's infinite Power acting above Nature, is gratis dictum, and entirely needless, since Nature with the general Concurrence only of God, is able to frame a Globe of folid and habitable Earth, as we have shewed above Page 86. and 88. in the 3d and 4th Figure; besides this, I say, we must conceive most great Gulfs, and vast Cavities in the lowest Bowels of the Earth, much lower, and much greater than the whole Cavity, or Receptacle of the Ocean, which might be fufficient to receive and fwallow up, not only all the Mountains, Hills and Hillocks on the Face of this Earth, but also the whole Globe of the Earth from its upper Surface wherein we live, to the Bottom of the Ocean; for all that was thrown out, and thrusted upwards from the subabyssian Mass, according to our Adversaries; but if there were any fuch great Gulfs and vast Cavities, which by necessity must be much lower and deeper than the bottom of our Ocean, then all the Waters of the Seas would flow thither, and leave their own great Receptacle and Cavity empty and dry. And befides, all Rivers which unload themselves in the Seas.

Seas, and all Fountains of Water would grow dry; neither would this terrestrial Globe of ours be at any rate habitable; Therefore to think of any such swelling, or rising of the subabysian Earth over the Waters, is but a meer Fiction, and not at

all possible, as things now do stand.

Likewise the other Supposition, which fays, that the Water forfook the subabysfian Earth, by retiring to one, or more Places, as into great Passages, hollow Pits, and Cavities, cannot subsist; for the' this be the common Opinion of our Divines, who, referring all to God, fay, that in the Beginning of the Creation (to wit, the third Day, when he made the dry Land appear) God dug up and made hollow the fubabyffian Earth in feveral Places, framing by that the great Cavities and Receptacles of the Seas, into which all the Waters retired, and the Earth which was in them Cavities, he threw up of all Sides on the Shore and Coasts of the faid Cavities, or Seas, by which all the Mountains and Hills were made: Tho' I fay this to be the common Opinion of our Divines, yet I must beg their Pardon, telling them, that Reasons of great Moment do hinder me from being of the fame Opinion with them, which where they are pleased to answer with Satisfaction, I will

will be ready to embrace their Affertion. And First, this Opinion supposeth the terrestrial Globe to be from the Creation of the same Shape and Form, as it is this Day; which feems to be the Opinion of those Atheists, who said, 2 Pet. 3. v. 5. That fince the time the Fathers flept, all things do so persevere from the Beginning, whom to refute, the Apostle plainly distinguisheth the primigenial, or antediluvian World, from our present postdiluvian, by reason of the peculiar Constitution, and inward Construction of each, for which, he fays, the old World perished by Water, and this new one shall perish by Fire, as we have largely urged, Chapter the fifth. Secondly, the Difficulty or rather the Impossibility of explaining the universal Deluge, attending this Opinion, as we have said, Chap. 1. Thirdly, the aforesaid good Divines, are obliged to shew that all the Properties and Phænomenons of Paradife, could stand and agree with this Opinion, which hitherto they have not done, nor, cannot, as has been faid, Chap. 2. Fourthly, in this Opinion the long age of Men before the Deluge; could not be naturally possible, as we have faid, Chap. 3. Fifthly, they are oblig'd to shew that it is not contrary to divine Providence.

Providence, and God's infinite Goodness, if this terrestrial Globe were created from the Beginning as it is now. See what is said of this, Chap. 4. Sixthly, they must answer all the Reasons and Arguments which we shall hereafter bring down to shew the Dissolution, Destruction, and Ruin of the antediluvian Earth: And Lastly, it is fit they answer to what we shall now urge against this their Sup-

position.

Be pleased therefore to cast an Eye on the Globe of the Earth, as it was before the dry Land appeared, which you may fee in Page 83. Fig. II. that subabyssian, or subaqueous Earth was of all Sides equal. plain and even, as all Philosophers and Divines do allow; Now let us suppose (as our Adversaries will have it) such a Cavity to be made in that Earth, which would be fufficient to receive all the Waters of the great Abyss, and represent our Ocean; and also that the Mountains were made of the Earth, which was cast or carried out of that Cavity. This supposed, it plainly follows that all the Mountains of the Earth taken together, would fill up the whole Capacity, or Cavity of our Ocean, being they were taken from thence; but the contrary clearly appears

by this easy Calculation: The present Ocean takes up half the Surface of the whole Earth, and the dry Land takes up the other half; let the greatest depth of the Ocean answer the greatest height of Mountains, and its moderate depth their moderate height; which must be true in this supposition. Now it follows that the Earth ejected out of the Cavity of the Ocean, should suffice to cover the entire Face of the dry Land, either with the greatest, or with the moderate Mountains; but it is certain, that both the greatest and moderate Mountains do not take up half of the dry Land, no, nor the fixth, no, nor the tenth Part : Therefore all the Mountain's great and small that are on the Face of the dry Land, could not fill the fixth Part of the Cavity of the Ocean. The same thing may be otherwise proved, by comparing the Mountains to the first Abys, thus:

All the Water of the Ocean, as of all other particular Seas, was in the Beginning spread over the whole Mass of Earth, when it stood surrounded by the great Abyss: Therefore, when the Cavity of the Ocean was made, the Earth cast out from thence, should take up as much place on the Surface of the dry Land, as the

Water

Water took up before it entered the faid Cavity; or (which is the fame) the Mountains should be equal to the Abyss: But all the Mountains on Earth gathered together, are much less than the faid Abyss: Therefore the Seas, or Mountains were not made after that Manner. I prove the Minor; let us suppose that the first great Abyss which encompassed the whole Earth, was by the half less deep than the present Ocean, (doubtless it was deeper,) or (which is the same) that it answered in depth, the height of our moderate, or middle-fized Mountains: From hence follows, that the whole Mass of that Abyss, should by necessity exceed in many Degrees all the Mountains of the Earth together; for fince the faid Abyss covered the whole Surface of the Glober the Mountains should take up half of that Globe, or the whole dry Land, and besides they should be of the greatest Size, or of the first Magnitude, or Height, and each of them twice as high as the depth of the Abys, and also so close joined together, as if they had made up a new Region of Earth. But it we consider them dispersed here and there over the dry Land, as now really they are, and at fuch a Distance from one another.

another, that they do not take up above the twentieth part of our terrestrial Globe; to make amends for this Defect, they should be of a most prodigious and stupendious Height, to wit, ten times higher than now they are. Wherefore it is a clear thing that all the Hills and Mountains on the face of the dry Land, are much less than that they might answer either the Cavity of the Ocean, or the depth of the first Abyss; and consequently that they could not be made after that manner pretended by our Adversaries.

Moreover, tho' we might fancy that fuch Mountains as are about, and near the Shoars and Sea-coasts, were made of the Earth and Stones cast out of the Cavities of those Seas; can any Man reafonably think that fuch great inland Mountains, hundreds of Miles distant from all Seas, were cast up after the same manner? How, or by whom were their Materials carried thither? Or were they thrown thither through the Air, like a Ball? A pretty Pastime indeed for God, or Creature! But tell me, how were the many deep and hollow fubterraneous Places made, which are so closed up, that the Air itself has no Access to them, which are often found by our Miners, and

and well known by Earthquakes? How or by whom were those Places evacuated, or whither were their Bowels thrown? Finally according to this Supposition, all Mountains should be solid Bodies inwardly, and grounded on the Earth with a full solid Bases; but this very seldom happens, for Mountains commonly are full of Caves and Cavities inwardly, as if worn away, as well in their Bodies, as in their Roots and Bases, and therefore

much subject to Earthquakes.

And truly, our Adversaries frame to themselves a wrong Notion of the Earth, for they fancy that this habitable Earth of ours was first of a smooth, plain, and even Surface all over, entirely united and joined in one, without any Swelling, Separation, or Excavation whatfoever, to wit, fuch as the bottom of the great Abyss was, or the subaqueous Earth; afterwards great Cavities being made in this Earth to receive the Waters of the Ocean, they overlay here and there huge bulks of Mountains and Rocks on the plain Surface of the dry Land, as Pieces newly and accidentally thrown over, or artificially fet over it. This I fay, is a wrong Notion, for the Mountains, Hills, Rocks, and other rifing Ground, are not 1100 meer

meer Agglutinations, or contiguous parts of the Earth, but rather continual and connatural parts thereof; for they are very often found stretched wholly and entirely, without any Interruption, down to the bottom of the Abyss or Ocean, as may be feen in feveral Rocks that lie on the Sea Coasts. Neither is there any Region or Surface of our Earth, to which, as to an unmoved Bottom or Bases, they might be agglutinated; that is to fay, there is no Region, or Surface of this dry, terrestrial Globe, which might be taken for the subabyssian Earth, or which remained unmoved, and in the fame Situation fince the Beginning; as plainly appears not only by the inward Parts and Veins of the Earth, intirely broken afunder, as we shall shew hereafter, but also that if you take whatever Surface, or outward Coat you please of this Earth, and that you follow it close, you shall find it in some places broken and torn afunder, far from containing an entire and equal Convexity all over the Region of the dry Land. And if there were any fuch Surface, or Region, as our Adversaries fancy, it would be either the continual Surface of Vallies, or of the Plains of the Earth; but the Vallies and

and their Surfaces, are not on a level, but very unequal, and uneven, as well among themselves, as with the rest of the Earth; and fome of them are fo low, and deep, that they go much farther down into the Bowels of the Earth, than the Surface of the Ocean, especially such as are the Receptacles, or Cavities of deep Loughs and Lakes. And as for the Plains, neither are they on a Level, or of the fame Height, even when they are at the same distance from the Sea; and the inland Plains, are commonly higher than those near the Seas; and all of them have an Inclination, or Bending in their Parts, and not at all even to a Level: For the in feveral Plains our Eyes can find no Inclination, yet if they firetch somewhat farther, the Inequality of their Surface and Situation will eafily be discerned, either by the course and running of Rivers, or by the Difference and Inequality of the sensible Horizon.

To conclude, take whatever Surface you please of this Earth, you shall never find any uniform Levelling, or perfect Equality of its Parts; for not only in the same Continent but also in the same Region, in the same Province, in the same

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Field, the Situation of the Parts and Surface are divers and various: and that too, taking whatever Line you please, either to the East, or to the West, North, or South. And not only that the Parts of this Earth have innumerable Diversities and Inequalities, when compared betwixt themselves, but also the common Situation of the whole Tracts of this terrestrial Globe is inclined, bent, and crooked, now more, now less; sometimes towards one fide, fometimes towards another, according to all manner and degrees of Inclination. And truly their Labour is in vain, who feek for any common Surface in this Earth, which would be on a Level, or of equal Height in all its Parts and Regions, and on which as on a firm Seat and Basis, all the Mountains, Hills, Heights, and Inequalities of this Earth, might be superstructed: therefore the aforesaid Supposition of our Divines, concerning the Origin of this Earth, and its present Shape and Form, cannot fubfift, as not answering even the general Phænomenons of this terraqueous Globe.

As to what those Divines said, Page 101. out of the first Chapter of Genes. v. 9. where God said, let the Waters that

are under the Heaven be gathered together into one Place; and let the dry Land appear. I answer, that Moses accommodated this his Description of the terraqueous Globe, to the Shape and Form it had when he writ that Book; for he did not think fit to trouble the Minds of his rude and unlearned Ifraelites with the philosophical Thoughts of things that were not then extant, and which could not be easily understood by them, unless he made use of long philosophical Harangues, and of a great deal of Words and Periods, with hard and cramp Terms which then were not in use, and bring down the whole Series of the Beginning of Things, and of the Formation of the first habitable Orb, according to its phistcal Causes, and divers Transmutations of the Chaos; all which would not agree with the fummary and plain Narration which he undertook. Wherefore I fay, that Moses understood by the dry Land the first Concretion, solid Surface, and habitable Orb, which God and Nature established all over, and round about the Waters, as we have faid Page 86 and 88. in the third and fourth Figure. And by that one place where the Waters under the Heaven were gathered I 3 together,

together, he understood the great Abyss which was under the aforesaid habitable Orb, and contained in its Bowels, which Abyss he called the Sea by the Figure Prolepfis. And truly, in my Opinion, the aforesaid Description of Moses, gives greater Difficulties to our Adversaries, than to us; for when he fays, that all the Waters under the Heavens were gathered together into one Place, and that the dry Land appeared, he feems plainly to infinuate, that all that dry Land was entire, and entirely united, and continued together without any Interruption, or Separation by intermediate Waters; as likewife that all the Waters under the Heavens were collected together in one Place, and with one continual Surface, without any Interruption or Separation by any intermediate dry Land; which is very true in our Hypothesis, and fully agrees with the first superabyssian Earth: But in our Adversaries Supposition it is false, for the Surface of our present Earth is not entirely united, or continued together, but divided into feveral Parts and Islands, and interrupted by fo many Seas and Waters flowing between them; neither are all the Waters gathered together in one place, for besides divers salt Lakes, and some gulf

gulfs of the Seas which in primitive Times were impervious without any known Communication with other Seas, the Cafpian Sea, which is of the same Antiquity with the main Ocean, is far distant from it, and from all other Seas, without any Communication with them, but entirely furrounded by the main Land in the nature of a great Lough. In fine, Moses makes no mention in the faid Description of the Earth, either of Islands, or Mountains, which notwithstanding are the most conspicuous parts of our terraqueous Globe, and more exposed to our Senses: which to me is a strong Argument, tho' a negative one, that in the first Formation of this Globe, there were none; otherwise why should not Moses make fome mention of them before the Deluge. being such principal and conspicuous Parts?

You will say, perhaps, that he makes mention of them in his History of the Deluge, when he tells us, Genes. 7. v. 19, and 20. that all the high Mountains under the whole Heavens were covered; and that the Water was sifteen Cubits higher above the Mountains. I answer, that these Words do not prove the Mountains to be extant before the Deluge, but that they were at the time of the De-

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luge and from thenceforth: and this is what we hold; for before Moles made any mention of Mountains, or of their being covered with Water, he tells us in the same chap. v. 11. that in the second Month, and in the seventeenth Day of that Month, all the Fountains of the great Depth (Thehom-Rabbah) were broken up, and the Flood Gates of Heaven were opened, and the Rain fell upon the Earth forty Days, and forty Nights. And it was in that seventeenth Day, and when the Fountains of the great Depth were broken up, that the Mountains were first made, as we shall hereafter shew; and fome Days afterwards the faid high Mountains, of which Moses speaks, were covered with Water.

You may likewise object, that if the antediluvian superaqueous Earth, had been made after that manner, and of that Shape and Form which we pretend, and so different from our present terrestrial Globe, it is not credible but some Authors, sacred, or profane, would make mention of it, or at least give some Hint of that outward Concretion, or first superabyssian Earth: therefore since we find nothing of that in History we may law-

fully call it a meer Fiction, or witty In-

Answer: Many Authors sacred and profane, made mention of it fo far, as was sufficient to give Light to others, if they pleafed to open their Eyes. That outward Concretion or first superabyssian Earth, which God and Nature placed over the Waters, was fufficiently infinuated by Moses, Genes. 1. v. 6. and 7. faying, God also said, let there be a Firmament made amidst the Waters, and let it divide the Waters from the Waters; and God made a Firmament, and divided the Waters that were under the Firmament, from those that were above the Firmament: which Words, tho' they may be in some manner understood of this terrestrial Globe on which we now live, and that the Firmament is the Space, or Air, from the Earth up, which divides the Waters above the Clouds, from the Waters on Earth, yet properly they might be understood of the superabyssian Earth, when all the Waters were inclosed in its Bowels, and no Water at all on the whole Face of that Earth, but fuch as fell down from the Air; fo that the faid Earth, might properly be called a Firmament, that is, a firm and folid Partition.

Partition betwixt both Waters, falty and fweet. And the Space, or Air from this Earth upwards, cannot properly be called a Firmament, being no firm or folid Thing; neither can you find any fuch folid Firmament all over this vast Globe of the Heavens and Earth. I must truly confess that Moles in the same Chapter lays fome things of the Firmament, which do not agree with the first superaqueous Earth: but the reason is, that Moses in the faid Chap. now speaks of the Firmament which divided the Waters from the Waters, and now again speaks of the Firmament of Heaven, where the Stars, are placed; so that he promiscuously speaks of both Firmaments, and we must have care not to take one for the other, or both for the same. Tho' the same superabyssian Earth was also sufficiently. mentioned by St. Peter in his fecond Epift. chap. iii. v. 5, 6, and 7. as also by 70b, chap. 38. and by Solomon, Prov. viii. as we have show'd from Page 93. to 100. Add to this what Moses says, Genes, vii. v. 11. All the Fountains of the great Abysis (which he calls in Hebrew Thehom-arrubbab or Thehom-Rabbah) were broken up; by means of which Description the Deluge came on the Earth; but in my Opinion,

nion, nothing can be understood by that Thehom-Rabbab, or great Abys, but our antediluvian Ahyss; and when this Thehom-Rabbab was covered, or thut up, (as Moses plainly supposeth it was, when he fays that the Fountains of the Thehom-Rabbab were broken up, and therefore covered or shut up before) it could not be covered or shut up by any thing elfe, but by the outward Concretion, and superaqueous Earth, which was superstructed on the Face of that great Abyss, or Thehom-Rabbah, as was faid Page 86, and 88. Fig. 3. and 4. And tho' fome Divines would have us understand by the faid Thebom-Rabbab, or great Abyss, our present Seas, yet we cannot be perswaded for many Reasons: First, because the Deluge could never happen by any Inundation imaginable of our Seas, for the Waters would not fuffice, as we have faid, Chap 1. besides the manner, or possibility of such an Inundation cannot be thought of; for the Sea and Earth make up one Globe, and the Surface of the Sea is much lower than feveral parts of the Earth, and not higher than any: Wherefore if all the Rocks and Heights on the Sea-shoar were taken away, and that all the Coasts were plain.

plain, even, and equal, yet no Inundation could follow, neither if the whole Surface of the Earth were leveled, and all the Mountains taken away. Moreover, if Moses understood nothing by his Thebom-rabbab but our Seas, commonly fo called, why did he not make use of the common Hebrew Word, which then and now fignifies the Sea, rather than of that new, strange, exotick word Thehom-rabbah? and yet in the whole History of the Deluge he makes no use at all of that Word which then fignified the Sea; neither in all his Narration does he once make mention of a Sea. 'Tis true the word Thehom-rabbah may be applied to fignifie the Sea, as also any other great Gulfs of Water; but neither in Mojes Time, nor in our Days, was it even instituted to fignifie the Sea: and certainly a plain Historian such as Moses was, ought to make use of such Words as were then instituted for the Signification of things. In fine, I ask, what Fountains of the Sea were those, by whose breaking up the Deluge happened, as Moses says? By breaking up of Fountains all Men understood the breaking of the Earth which covers the Fountains of Water? for Fountains cannot otherwise be

be broken up: Therefore the Waters of the Abys, or of the great Depth, or Thebom-rabbab (call them as you please) were covered all over with Earth; which is what we pretend: and if covered over with Earth, they cou'd not be the Waters of our Seas, as now they are; and consequently they cannot be understood by the Abys or Thebom-rabbab. Out of all this we see that sacred Authors made mention, or at least sufficiently hinted the antediluvian superaqueous Earth, so that others without any Fiction might have good grounds to put it in a clearer Light.

We find also great Grounds for the same Hypothesis in most ancient profane Authors; for Hefiodus, and Aristophanes, very antient heathenish poetical Philofophers, speaking of the Production and Formation of this World, fay that the Chaos was the Beginning of all Things, and the first Mother, which brought forth the Night and the Abyss, called by them Tartarus; the Night afterwards brought forth the Heaven, or the Air, and the fame Night in conjunction with the Abyss, brought forth the Earth; and finally the Earth brought forth the Gods and Men. This Genealogy of the World is thus placed by them:

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The

The Chaos

The Night
The Abys
The Heaven, or Air
The Gods.
The Earth
The Men.

This Genealogy of Heaven and Earth fully agrees with our Hypothesis, where the Night and the Abyss, or Tartarus are said to be the first born, and as it were twins, of the great Chaos, or mofaical Tohu Bohu, which our Bible tranflates thus, Genes. i. v. 2. And the Earth was void and vacant (without Form) and darkness was upon the Face of the Depth, (primigenial Abyss) and the Spirit of God moved over the Waters; for the Tohu Bohu, or great Chaos, was first of all divided into two Bodies, or two Orbs, or Spheres, as we have feen, p. 83. in the 2d. Figure; the upper Body was the Night, to wit, the thick, dark, impure Air, which Mofes calls the Darkness, giving no Passage to the Sun-beams, or Light; and the inferior Body was the Abyss, or Tartarus, called by Moses the Depth, or Thehom-Rabbab. Afterwards the Night brought forth two other Younglings, as Twins, of the one fide the Earth, which she brought forth in conjunction with the Abyls; and of the other the Heaven, or the clear and refined Air, which she alone brought

brought forth: for the thick and impure Air being purged and cleared, it's Dreggs, and Sediments fell down on the thick oily Surface of the Abyss, where they made the Earth, and its small light, and refined Particles afcending, made the clear Air, or the fublunar Heaven; and its most pure, most light, and refined Corpuscles made that Region of the Air, where no Vapours, nor the earthly Atmosphere can reach to. Finally, the Earth brought forth the Generation of Heathenish Gods, and Men; for Man was not created until the habitable Earth was made and fettled: Thus the Heathenish Philosophers. Can any thing, I pray, agree better, both in Words and Meaning, with our Hypothesis of the Generation of this terrestrial Globe, than the aforesaid Genealogy? some ancient Writers instead of the Word Tartarus, make use of the Word Oceanus, and not without Reason, for the Word Tartarus either fignifies any Space under the Earth, whether filled with Air, or with Water, or it fignifies only the subterraneous Cavities in which there is no Water, but filled with Air alone : and fince at the first Beginning of Things, and in the first Ages of this World, the Ocean, or the Abyss

Abysi filled up all the Space that was under the Earth, it might therefore be well called by the Name of Ocean, or Tartarus, for then they were the same; and Plutarch, now calls it Ocean, now Tartarus. But long after, when that Ocean or Abyss, was much diminished by the continual Exhalation of its Particles through the Body of the Earth by the heat of the Sun, there was a great empty Cavity made, or a vast void Space, betwixt the Surface of the Waters beneath, and the Convexity of the Earth above, which Cavity continued to be made greater and greater daily, until the Day of the Deluge; and this void fubterraneous Cavity might properly be called Tartarus, as effectually it was so called by the antient Writers.

Besides the aforesaid first material Principles of this terrestrial Globe, to wit, the Chaos, the Night, Tartarus, Air and Earth, other ancient Authors make mention of an efficient Principle, which some of them call Amor (Love) some Mens (Mind, or Understanding) and some Spiritus, (Spirit) by means of which all Transmutations and Changes of the Chaos were done: all things (says Anaxagoras) were in the Beginning mix'd together, but the Mind

Mind separated and adorned them, and reduced them from a Confusion to right Order. What could be faid more Christianlike, or more to our Purpose? for by this Love, Mind or Spirit, of which they speak, I do understand the Spirit of God, which Moses mentions, Genef. i. v. 2. and the Spirit of God moved over the Waters. doubtless working, and separating their Parts, reducing them to right Order from the Confusion they were in, as we have faid p. 83. and 86. Fig. 2. and 3. and adorning them afterwards. Eulebius tells us, Preparat. Evang. lib. 1. cap. 8. Parmenides taught the Earth was begotten and framed out of the thick and impure Air falling down on the Abysis: Which is our Opinion, Word by Word. Diodorus Siculus Bibl. Hift. cap. 1. brings down these following Words out of the ancient Egyptian Philosophy. When all things began to be, Heaven and Earth were of the felf same Face, both being mixed together; but when the Bodies feparated from one another, the World took a right Order; the Air was in a perpetual Motion, and its fiery Parts flock'd up to the bigh Places, for by reason of their Lightness they could not but endenwour to go up ; but its thick, muldy and impure

impure Parts, by reason of their Weight, fell down into the same Place with the moist and watry Concretion: And the Earth was made of this Sediment of the Air, mixt with the waterish fat and oily Parts. In fine, the aforesaid Eusebius, Preparat. Evang. cap. 10. thus fays: The Phanician Divinity assigns the dark, and thin Air, with the muddy tartareal Chaos, for the Beginning of all Things. Those Principles, or Particles, were infinite, and for a long time without Bounds, or Limits; but when the Spirit was touched with the Love of these Principles, then a Commixtion was made, and to this embracing the Name of Cupid was given: and this was the Beginning of the Procreation of all Things. From the embracing of this Spirit, the Mot was made, which some call Mud, or Slime, others the Rottenness of a waterish Mixtion: and from this was made the Seed of all Creatures, and the Generation of all Things. This Text wants some Explanation, the better to understand it; wherefore when it fays that the Air with the muddy, tartareal Chaos, was the Beginning of all Things, by the muddy, tartareal Chaos is under-- flood the fat and oily Surface of the Abyls. When it is faid that the Principles,

or Particles, were infinite, that is, indefinite, both in Number and Figure, inafmuch as naturally they cannot be numbered by us. When it is faid, that the Spirit being touched with the Love of thefe Principles, then a Commixtion was made, (being separated before) to which the Name of Cupid was given; the meaning is, that the Spirit of God being moved over the great Abyss, then a Mixtion of the thick, gross, and impure Air, with the oily Surface of the Abyss, was made, which was called Cupid, to wit, the superaqueous Earth, which by reason of the Union, Love, Amity, and Concord, which then happened betwixt the Abyss and Air, being both joined in one, was called by the Phænicians Earth. When it is faid, that from the embracing of this Spirit, to wit, from the Union, Concord and Mixture of the Air, and the oily Surface of the Abyss, effectuated by the Spirit of God, the Mot was made; the meaning is, that from that Union and Mixture, the Slime covered the and moist Earth which whole Surface of the Abys, called by the Phænicians Mot, was made, which afterwards became dry Land, and habitable, and which doubtless was the Seed, and Nurse of all corporeal Creatures. K 2 all

all this we fee how well the ancient profance Authors not only hinted, but exprefly taught what we afferted in the present Matter; and consequently it is no Fiction of ours. I cannot omit here that remarkable Doctrine, or rather Principle of the ancient Aristophanes, who fays, that in the Beginning the thick, gross and impure Air lying upon the Waters of the Abysi brought forth an Egg, from whence came all Mankind; which in my Opinion, is not only true, but also a very elegant Expression; meaning, that the thick gross, and impure Air falling down by its own Weight upon the fat oily Surface of the Abyss, made up the primigenial habitable Earth, which was of an oval Figure, or like an Egg, and which afterwards was the Nursery of Mankind. But in the following Chapter, we shall endeavour to prove that the primigenial superaqueous Earth was of an oval Figure.

#### CHAP. VII.

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The Antediluvian Terrestrial Globe, was of an oval Figure.

HE most renowned Philosophers of the days of Old, affirmed the terrestrial Globe to be of an oval, or oblong Figure; fo the Orphical, Phanician, Egyptian, and Perfian Philosophy teacheth. Achilles Tatius, Isag. in Arat. Phæn. cap. 6. thus said, some affirm the Figure of the World to be Conick, (like a Sugar-loaf) others like a Sphere, and others Oval; and this last Opinion is held by the Orphical Phir losophers. The same was taught by Empedocles, as Stobæus writes, de placit. Philof. lib. 2, cap. 2. fo that this Notion of the mundane Egg is very ancient, and much celebrated, as well in the old beathenifb Philosophy, as in their Divinity. it was that the Egg in ancient Times was held as a facred Thing, by reason it represented the World, and was the Figure of the first primigenial Globe. Plutarch fays, sympos. lib. 2. quæst. 3. that the facred Orphical Doctrine not only held the Egg to be more ancient than the Hen, but also that it contained the Off- spring and K 3 Antiquity

Antiquity of all Things; and therefore was reasonably consecrated in the Sacrifices of Bacchus; for it represented a most great Mystery, to wit, the Nature, Offfpring, and Figure of the first Earth. The Egyptians also held the Egg for a true Cymbal of the World: wherefore those of Thebes, whenever they fignified God the Maker of the World by any Hyeroglific, they painted him fo, as if he feem'd to cast an Egg out of his To which if we add, that notable Saying of Aristophanes in the end of the precedent Chapter, that the gross and impure Air along with the oily Surface of the great Abyss, brought forth an Egg, to wit, the antediluvian terrestrial Globe, we have no reason to doubt but the ancient Philosophers held the antediluvian Earth to be of an oval Figure. And with this, I think well agrees, what Mofes faid, Genes. i. v. 2. of the first Production of the Earth, Spiritus Dei ferebatur super aquas, the Spirit of God moved over the Waters; others translate it thus, Spiritus Sanctus incubuit super Abysjum, the Holy Ghost sat (as the Hen does upon her Eggs) on the Abyss: and to what Purpose but to bring forth the great Egg of the terrestrial Globe? This was

was express'd fufficiently by the ancient Philosophers, saying, that a Pigeon sat upon an Egg, and brought forth the fair Goddess Venus, to wit, the Earth, in the fame Sense that the Phanician Divines understood by Cupid the Earth, as we faid in the precedent Chapter, p. 130. We might eite many other ancient Philosophers, especially of the Persian Philosophy, teaching the primigenial Earth to be of an oval Figure, but this is enough to shew what Antiquity thought of this Truth, and the Height too of Antiquity, for Orpheus, of whom the Orphical Philosophy, lived in the time of the Judges of Ifrael, as Plutarch, Achilles, Tatius, and Proclus tell us.

Now let us see, why these ancient Philosophers made this Comparison betwixt the Egg and the terrestrial Globe, and in what does the Similitude consist. Their Reason doubtless was, that they thought the terrestrial Globe to be of an oval Figure, and to understand where this Similitude is grounded, take the following Figures.

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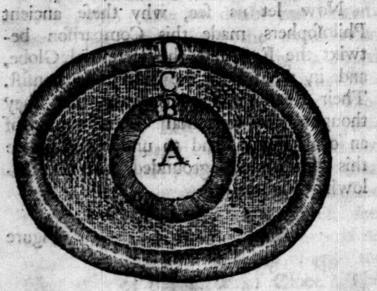
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Figure 1.



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The Antediluvian Oval Globe.



We believe as an Article of our Faith, that there is a place of Punishment for the wicked after this Life, which is called Hell, where their Souls and Bodies will be eternally punished in Fire; and my Opinion is, with the generality of our Divines, that Place and Mass of Fire to be in the Center of the Earth.

This therefore supposed, (not being my Business now to come to the Proofs thereof) cast an Eye on the 2d. Figure, which you see to be Ovisorm: In the Center A, is Hell, and Hell Fire, which represents the Yolk of the Egg, B, is the interior subabyssian, or subaqueous Earth, which represents the thin Skin, or Tunicle, that separates the Yolk from the White of the Egg. C, is the great Abyss, or Mass of Waters, representing the White of the Egg. And D, is the outward, or superaqueous habitable Earth, representing the Shell of the Egg. By which you see in what the Similitude 'twixt the Egg, and the antediluvian Globe does consist.

Whatever the Figure of our present postdiluvian terraqueous Globe may be, being broken and torn to Pieces by the Deluge, as we shall hereafter shew, at least the antediluvian Globe, by its first Confititution.

stitution, when as yet an aqueous Globe, and all covered with the Abyss, ought to be somewhat long, and of an oval Figure. The reason is, for tho' I do not doubt but Archimedes's Demonstration proving the Water to be of a spherical Figure, is true, to wit, that a Mass of Water will naturally form itself into a spherical Figure about its Center, if that Mass stands still, quiet, and unmoved; yet I am persuaded, if that Mass of Water be fwiftly and violently rolled, or turned round about its Center, that by fuch an Agitation it will necessarily grow long, and become of a Figure much Oval like. So we fee when Water is driven forward in a Vessel, or agitated in the Seas, or Lakes, by the Wind, towards the Shore, that the Waves extend themselves towards the contrary fides into an oblong Figure, when not hindered; but the Waters of the great Abyss, before they happened to be covered by the primigenial earthly Crust, or Shell, were fwiftly and violently agitated round about their own Center, by the Motion of their liquid Heaven, (as now we suppose) therefore the Waters of the great Abyls cou'd not but shape themselves into an oval Figure. For the Mass of Water which

which was under the Equator being much more agitated than the Waters which were towards the Poles, where they performed leffer Circles; the Waters that were not agitated, endeavouring to recede from the Center of their Motion, and not being suffered altogether, nor very much, to flow from it, by reason of the Air leaning and striving against them, and refifting of all Sides, they could not otherwise be rid of such an Agitation and Pressing, than by flowing to both fides or ends, as far, and as much as they were fuffered by the great Body of the Air: For Waters being press'd and agitated in one Place, do flow wherever they have Access, and hath less Agitation or Position, this being proper to all Fluids: And by reason of this flowing, and defluxion of the Waters of the great Abyss to both Sides, or Poles, and the disburdening of their intermediate Parts under and about the Equator, that aqueous Globe could not but have an oblong Figure, and be shaped much like an Egg; as you see, p. 136. in the first Figure. And fince the Concretion, or Earthly Shell, which we call the Antediluvian Earth, made afterwards on the Surface of the faid aqueous Globe,

or great Abyss, could not but imitate the Figure of the faid Surface, as the Ice must imitate the Figure of the Water whereof it was made, and on which it stands; the Consequence is, that the antediluvian terrestrial Globe was a great Egg, or of an oval Figure. And if you ask, whether the interior subaqueous Earth was likewise of an oval Figure? I think not, but rather entirely spherical; for the Parts of that Earth not being fluid, but altogether folid and firm, no equal Agitation, no total Motion about their own Center, cou'd make them take any other Shape, or Figure, Hence you fee in the 2d. Figure, p. 136. that the inward fubaqueous Earth B, is of a spherical Figure, tho' the great Abyss C, furrounding it be Oval. And if you ask, why did we not likewise make the great Abyss and the terraqueous Earth p. 83. 86. 88. and 92. in the 2d. 3d. 4th. and 5th. Figures, oval? I answer, because we treated of these there absolutely, and as independent from any outward Motion, which might be caused by their liquid Heaven, considering them only in their Substance, and Changes, and not in their Shape, or outward Figure; but here we treat of them respectively, 10

in regard of their outward Motion, proceeding from the Agitation of their fluid Heaven, confidering their Shape and out-

ward Figure alone.

You will fay, perhaps, that this Doctrine supposeth the System of Copernicus to be true; for it afferts the rapid Motion of the great Abyss, and Earth about its own Center. What then? I think my Hypothesis is nothing the worse for afferting the Copernican System, so much applauded by learned Men: Neither do I fee any natural Reason that can in the least infringe upon the Subfistency of that System, as we have largely shewn in our Philosophia Vetus innovata, part. I. disput. 9. quæst. 2. where we answered the Reasons to the contrary; neither is it my Business now to insist any further on that philosophical Point. But if you be fo scrupulous in allowing the aforesaid System, by reason of some Bugbears of Authorities, which go but very short in proving the contrary; you may fay, that even according to the System of Tycho Brahy, the great Abyss, and consequently its exterior earthly Crust, or Shell, might and ought to be of an oval Figure: For the Abyts, then being uncovered as yet, and fluid, and a gentle

tle constant Wind blowing still from one Side under the Equator, and more there than at the Poles, it might well cause the said Abyss to shape itself into an oval Figure, as we said above, tho' the whole Body of the inward Earth, and Abyss, were not agitated round their own Center every twenty four Hours, as Co-

pernicus holds.

You may also object, that this present terraqueous Globe of ours is of a spherical Figure, as learned Men commonly affirm: Why not likewise the antediluvian Globe: I answer, tho' it were evidently proved (as it is not) that this terraqueous Globe of ours is Spherical, it would not follow that the antediluvian Globe must have been so; for this prefent Globe of ours being rent and torn afunder in all and each of its confiderable Parts, in time of the Deluge, as will be shewn hereafter, and truly, so far, that even its Situation to the Sun was changed, it might eafily acquire a spherical Figure, or fomething like it, in the time of the faid Deluge, tho' it were before Oviform. But, as for the Antecedent, I must tell you it is our Unhappiness to have had such Predecessors as were too easy in receiving many Things

upon bare Credit, and publishing them for Truth, without looking any farther into the Matter, being fatisfied with this great pythagorical Reason, quia ipse dixit. Such is the common Opinion of the fpherical Figure of our Globe, which hardly has any other Grounds, but that our famous Predecessors were pleased to affirm it fuch. 'Tis true they alledge some few Observations, proving (as they think) the Rotundity of this Globe, as the Navigation round about it; the appearing and hiding of Stars, Mountains, and Castles, to those that sail at Sea; and fuch like. But tho' all this prove the Globe not to be plain, but of a Convexity; yet it does not shew what kind of Convexity it is, whether Spherical or Oval, much less it proves the latter. Likewise they say, that such as live under the Poles, have the Sun fix Months over the Horizon, and fix Months under; that the Degrees of Latitude in the Earth are equal in all Places, and in all Places equal to the Degrees of Longitude; and fuch like. But these things are also taken much upon Credit, and without any other Ground, but the presupposed Rotundity of the Earth; and if we confult fuch Obfervations as were made on these Heads,

we shall find great Grounds to doubt of their Truth. For, as concerning the Degrees of Latitude in the Earth, or fuch Spaces as answer the Degrees of the taken Meridian, all the Observations that have been hitherto made, prove rather fuch Spaces to be unequal than equal, to wit; betwixt the Equator and the Poles. And as for the Sun being over, or under the Horizon for fix Months, towards the Poles, fuch Observations as have been made in new Zembla, at Spitherg, and about Greenland, are so irregular, that they favour but very little the spherical Convexity of the Earth, and much its Ovality. So that no Observation, no natural Reason can shew the perfect Rotundity of this Globe, or prove it is not Oval; and I would be greatly obliged to any Man that would make the contrary appear: Tho' as I said before, if it were certain that our present Globe is Spherical, yet that would not prove the antediluvian Globe to have been fo.

#### CHAP. VIII.

The terrestrial Globe before the Deluge, had a far different Situation in regard to the Sun and Stars, from what it now has.

T is certain by long Experience that the Situation of our present terrestrial Globe is not right, straight, or direct, in regard to the Sun, but much inclined, and bent; which is the reason why we have so many Changes, and Seasons in the Year, Winter, Spring, Summer, and Harvest, Heat and Cold in divers Degrees, and strange Alterations of Climates over the whole World. And fince all Christian Divines do agree, that in Paradife, (which doubtless was on Earth) and in my Opinion not only in Paradife, but all over the antediluvian Earth, at least for the most part, there was no Change of Times, or Seasons, of Winter, or Summer, Heat, or Cold, but a perpetual Equinox, and an equal Revolution of the whole Year, a perpetual Mildness and Tranquility of Air, Fruit at all times ripe, Vegetables full of Sap and Green, the Earth cherished with an even heat of the Sun, and Men living for feven,

feven, eight or nine hundred Years; it follows that the terrestrial Globe during Paradise, and always before the Deluge, had a right, straight, and direct Situation, in regard to the Sun and Stars, and confequently a far different one from what it has now, as being inclined and bended sidewise. And the this Opinion will doubtless seem strange to many, yet we dare undertake to prove it out of Antiquity profane and sacred, and by natural Reason.

Let us therefore see in the first Place what profane Antiquity fays to this purpose; we have several famous Citations of antient Philosophers, which shew that the Situation of this Earth was changed, and the Globe inclined, and bent, or press'd down towards the South, or Meridian parts, or the Antartick Pole, the opposite Artick Pole being raised up to the same Situation now it has; and that this did not happen in the beginning of the World, but after the Earth was framed, ordered, and filled with Vegetables and Animals. Plutarch lib. 2. cap. 8. de placit. philosoph. thus says: Diogenes and Anaxagoras were of Opinion, that after this World was made and ordered, and after it produced Animals out of the

the Earth, it inclined and bent, as of it felf, towards the Southerly Parts; and perhaps this was done by Providence, that some parts of the World unbabitable. might become babitable, by reason of the Cold, Heat, and convenient Temperateness. These last Words are worthy to be noted, to wit, that some parts of the Earth might become habitable, that is to fay, as Stobæus, lib. 1. phyf. c. 18. explains them, that fuch parts of the Earth which were before unhabitable, might be made habitable, to wit, the torrid-Zone, which by reason of the direct Situation of the Earth, was before the Deluge, unhabitable, as we shall say hereafter, might be made habitable by changing that Situation into an oblique one, as it is this Day. Likewise, Empedocles, as Plutarch tells us in the aforesaid Place, that the Northerly parts of this World declined, the Air yielding to the Violence of the Sun, so that the Parts near them were lifted up on high, and the Southerly parts pressed down, and this equally happened to the whole World. Leucippus also makes mention of this inclination of the Earth, as Diogenes Laertius tells us, whose Words are thus delivered by Plutarch, lib. 3. de placit Philosoph. cap. 12. Leucippus thinks that the Earth tumbled

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tumbled towards the Southerly parts, by reason of their rarity and thinness; for the northern Parts were all frozen, whilst the opposite southern Parts burned. Plutarch also gives us Democritus's Opinion of the same Matter, immediately after, faying: Democritus judging the southern Part of the ambient (Air) to be weaker, therefore he faid, that the Earth being increased in its bulk, declined to that Point; for the northern Parts being unequally temperate, and the southern Parts equally, the Earth declined to those Parts where it abounded with Fruit and Increase. I do not dispute here whether the natural Reafons which these Philosophers affign for the Change of the faid Situation, be true, or not, our Bufiness being only to shew, that they affert the faid Change and Alteration. Very notable also are the Words of Anaxagoras related by Diogenes Laertius, who after speaking of the Change of the Situation of the Earth, as we have seen above, thus he delivers his Opinion of the Change of the Situation of the Stars: Astrorum ab initio motus fuerunt tholiformes, ita ut circa Verticem terræ semper appareret polus, postea autem declinatione accepit; that is to fay, from the Beginning the Motions of the Stars

Stars were tholiform, fo that the Pole still appeared about the top of the Earth, but afterwards it took a Declination. Two things Anaxagoras fays here; the first that the Poles declin'd from their first Situation; the second, that the Motion of the Stars, before that Declination was tholiform: that is to fay, (if I do not mistake him) that the Sun, and the Earth, and perhaps the other Planets too, had from their Beginning their Motions uniform; concentrical, and upon parallel Axels. By all this we fee, that the Memory of this altered Situation of the Earth, still remained with the antient Philosophers In the Land Town

And that the Situation of the Earth, before this Change; was right, straight, or direct, is plainly proved by that Tholiformity, or Uniformity of the Stars, of which Anaxagoras speaks: as also by this, that the aforesaid Philosophers say the Earth inclined, declined, or was bent; but things are only said to incline, or bend, which before had a right, or direct Situation: Therefore such was the Situation of the Earth in the Beginning. Moreover, several antient Authors both sacred and profane, witnesseth, that in the golden Age, to wit, before the Deluge,

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the Year was not unequal, that is, of fo many Seasons, and Changes, as it is this Day; which not only proves that the Situation of the Earth is changed, but that before the Deluge it had a right and direct one; for it is very common, as well with profane Authors whenever they speak of the Region of Saturn, and of the Golden Age, as with the Holy Fathers and Divines, when they speak of Paradife, either explicitly to exclude the four Seasons and Changes of the Year, or implicitly afferting the constant and perpetual Mildness, Clemency, Temperateness and Equality of the Air, and Year, which cannot fland with the Extremities of Winter and Summer. And hence Bellarmin, de grat. prim. bomin. very well noted, that the perpetual Mildness and Temperateness of the Air, and the perpetual Spring, which Christian Authors affert, to have been in Paradife, cou'd not be but by changing the Course of the Sun, or which is the same, the Situation of the Earth.

Let us now consider one remarkable Text of Holy Scripture, which regards the divers Seasons of the Year, and variously explained by the Expositers. The Deluge being over, God said, Genes. viii.

v. 22. All the Days of the Earth (that is, while the Earth will remain) Seed-time and Harvest, Cold, and Heat, Summer and Winter, Night and Day, Shall not cease. Many learned Men doubt of the right meaning of this Text; for my part, I think, that the aforesaid Words infinuate fome great Change, and Inequality newly induced in the Times after the Deluge, and fome diversity of the Seafons of the Year, of Seed-time and Harveft, of Cold, and Heat, of Summer and Winter, which was not in the Years before the Deluge, to wit, all uniform and equal in their Parts, equally hot, and cold throughout the whole Year, and equally fit for Sowing and Raping: And thus Historia Scholastica interprets the faid Words, faying; perhaps there was not before, such great difference betwixt the four Seasons of the Year, by reason the Waters were not gathered together in Clouds till the Time of the Deluge. Likewife all those who say it never rained before the Deluge, must use the same Interpretation with us; and confequently that the faid Viciflitudes of times were altogether unknown before the Deluge, and that they first appear'd to the Postdiluvians; and if so, the Consequence is, that L 4

the terrestrial Globe had a right and direct Situation in regard to the Sun, before the Deluge, from which that uniniform and perpetual Mildness and Tem-

perateness of the Air proceeded.

I know the Authors of the Rhenish English Bible expound the aforesaid Text in their Margin, citing for it St. Ambrose, lib. I. de Noe, et Arca, cap. 23. after this manner: In the whole Year of the Flood there was no Sowing or Raping, no pleasant Varieties of Time, but all defolate, and miserable; and therefore in this Text God promiseth benceforth more seasonable Times: I bear all the Respect imaginable to the Authors of the Rhenish Testament, as they well deserve, and much more to St. Ambrofe; but I hope they will give me leave to be as plain with them, as they are with others, and to make fome few obvious Exceptions to the aforesaid Interpretation: The Text fays, Cold, and Heat, Summer, and Winter, Night and Day, shall not cease: Allowed then that in the whole Year of the Flood, there was no Sowing, or Raping, (which is very true, and very needless to be express'd, fince all Mankind was at that Time in the Ark, and no dry Land appearing) how, I pray, could the Flood hinder the Viciffitude

cissitude of Days and Nights, or the natural Course of the Sun for a whole Year? And in Case the Light of the Sun was obscured or hidden, during the forty Days it rain'd, and the Heavens were cloudy and dark, when this Rain was over at the forty Days end, what could hinder the Day Light for the three Hundred and twenty five Days following? Or what could be the Cause of such a constant Night, for a whole Year? Moreover, how could the Flood hinder the Viciflitudes of Heat and Cold, Winter and Summer? Don't we find by Experience those Viciflitudes to be as well in the main Ocean, as on the dry Land? And if the whole Globe of the Earth was covered with Water fifteen Cubits above the highest Mountains, do you think that the Inequalities and Viciflitudes of Heat and Cold, Summer and Winter would therefore cease? For my part I do not understand it.

Others say, that Moses by the afore-said Words, as by a kind of Periphrasis, or Circumlocution, signified only that the Flood would never return again on the Earth. 'Tis hard, if Moses, however so mystical, or obstruse he might have been, could not find more proper Words, to fignise

fignifie that, than the aforesaid: if he had mean'd that he wou'd rather have faid, the Flood-Gates of Heaven shall never be open'd again, neither shall the Fountains of the great Abyss be broken up hereafter; the Ocean shall not pass its Bounds and Limits, neither shall the Mountains be overwhelm'd with Water, while the Earth will remain. By these, or fuch Words, he would clearly tell his Mind; but to fay, Cold and Heat, Summer and Winter, Night and Day Shall not cease, what has this to do with the Flood fince it does not touch, nor express, nor imply either the Causes, or the Effects thereof? And if Moses by the aforesaid Words had meant that the Flood would not happen any more, he would doubtless immediately after, or before, make mention of God's Covenant with Noab, and of the Rain-bow given as a Sign of the faid Covenant, that the Flood should never again return; which he did not in that 8th Chapter, but in the following 9th Chapter, v. 8, 9, 10, 11, 12, &c. therefore the aforesaid Words impart some great Change and Inequality in the postdiluvian World, to wit, the diversity of Seasons and Times of the Year, of Seed-Time and Harvest, of Cold and Heat, Winter

Winter and Summer, which was not in the antediluvian World, when the whole Year was uniform and equal, with a perpetual Spring. But to understand throughly the aforesaid Text, you must conceive that Moses there tacitly speaks of three Degrees, or Orders of Times and Nature, the first is the Antediluvian, which he supposeth to be altogether equal and uniform, without any diversity of Times or Seasons; the second is this Postdiluvian altogether unequal and different in its Times and Seasons, which Moses defcribes by the Viciffitudes of Winter and Summer, Seed-time and Harvest, Cold and Heat; and the third is the future World after the Day of Judgment, when the Earth will cease to be, and not only the aforesaid Seasons of Winter and Summer, Seed-time and Harvest, Cold and Heat, but also the Succession of Nights and Days will be taken away, as St. John says, Apocal. 10. v. 6. and chap. 21. v. 25. So that this last part of the Text concerning Night and Day, alludes only to the future World. Thus I think the faid Text may be well understood, but I submit to all better Judgments.

Wherefore I conclude that in Noah's Days, or in Time of the Flood, the Year

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Year was changed, and its divers Seafons, with the divers Degrees of Heat and Cold, began; which could not be, or happen, without altering the Situation of the Earth in regard to the Sun, from a right and direct one, to an inclined and oblique Situation; which Change of Situation happened in time of the Deluge, when the Earth and all its Parts, were violently toss'd and tumbl'd by the breaking up of the Fountains of the great Abyss, and the finking of so many huge Fragments of the superaqueous Earth, as we shall shew hereafter; by which the Globe might eafily acquire an Inclination and oblique Situation in regard to the Sun, which it kept constantly from that time downwards. And all fuch learned Men will eafily approve of this Doctrine, that understand Noah by Janus, sometimes called Vertumnus, to whom the antient Poets, and heathenish Divines gave the Power of changing the Times and Seasons of the Year, according to that of Ovid. 1. Fast. where Janus thus speaks of himself.

Me penes est unum Vasti custodia mundi, Et jus Vertendi cardinis omne meum est. They also said that Janus had two Faces, the one looking backwards, the other for-

forward; the one looking upon the World before the Flood, the other on the World after the Flood; as being betwixt them both: He was also said to have two Faces, by reason he was deemed to be the Cause of the two principal Seasons of the Year, Summer and Winter. And for this Reason also, he was said to have four Faces, because of the four Seasons, Spring, Summer, Harvest, and Winter, of which the postdiluvian Year is made. If therefore by this heathenish Fanus, to whom the ancients allowed the Power of turning the Heavens, the Times, Seasons, and Hinges of the Year, we understand Noah, as several learned Christians do. we shall easily believe there happened in his Days some great Change of the World and Year, and that the aforefaid Words of Scripture alluded to that: we shall I say, easily believe there happened in his Times fome great Change of the World and Time, fince after an Equinox and uniform State of Nature of 1656 Years, there appeared a double or quadruple Season of the Year, with a various and multiform Shape of Heaven and Earth, the great Hinges of the Heavens being turned, or the Situation of the Earth changed.

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All Astronomers do agree that the divers Seasons and Changes of the Year proceed from the oblique or inclined Situation of the Earth in regard to the Sun, or of the Axel of the Ecliptick; wherefore if before the Deluge there were no fuch Changes of Times, or Seasons in the Year, but all equal, and uniform, with a perpetual Spring, as was faid before, it follows that before the Deluge the Situation of the Earth was right and direct to the Sun, and that afterwards it was changed into an oblique and inclined Situation: which we prove now thus, by natural Reason. Let us confider a great, equal, and uniform Body, whose Center of Gravity and Magnitude is the felf same, and which is carried in the Ecliptick round the Sun by the Motion of its liquid Heaven: (fuch a Body we suppose, out of what's faid in the 6th. Chapter, and out of the Principles of Philosophy and Astronomy, the primigenial Earth to be) This great Body being levelled, and hanging in the free Air, we see no Reason why it should not have its Axel parallel to the Axel of the faid Ecliptick, both the Poles being equally inclined to the Sun; for the Nature of Weight (which must determine the

the Situation of Bodies in a free medium) requires that fuch a Body does not hang, or incline to the Center of its Motion and Gravity, more of the one Side, than of the other. So we see, when a piece of Timber, or any other material Substance, swims in Water, provided it be homogenial and uniform, that it has its Axel equally inclined to the Axel of the Earth, and parallel to it. Therefore the terrestrial antediluvial Globe being equal and uniform, (as we faid) and carried by the Motion of its fluid Heaven round about the Sun in the Ecliptick, and in a free Medium (as now we suppose out of Philosophy) by Necessity it must have a right and direct Situation to the Sun. And if the Body of the primigenial Earth was Oviform (as we faid it was in the precedent Chapter) the more and the firmer it should keep itself in that parallel Situation; for an oblong Body freely fwimming in any Liquid, when neither of its Extremities weighs more than the other, will more firmly flick to its right Situation and Parallelism with the Axel of heavy Things, and is harder to be removed from its Æquilibrium, than any perfect spherical Body; tho' neither of them both.

both, provided they be regular, and their Center of Gravity be the same with the Center of their Magnitude, as the primigenial Earth was, can incline, or dispose itself obliquely to the Center and

Axel of its Motion.

It is therefore plain, that primigenial, or antediluvian Earth, altogether uniform and equal in Weight of all Sides, (as we now suppose it was, by its Formation) could not naturally but fettle itself in a right and direct Situation to the Sun. unless it were hindred by some Impediment unknown to us: And from that Disposition and Situation, there could not but follow a perpetual Equinox over all the Climates of the Earth, and an equal and uniform Course of all the Months and Days of the Year, which doubtless would be most fit and commodious for that new born World. For if you allow fuch an earthly Globe as we described, of that Form, of that Situation to the Sun, and of that Temper and Goodness of Soil, which we attributed to the primigenial superabyssian Earth, by the Nature and Manner of its Production, you will foon find out, not only the Reason of all the Phænomena's which Holy Scripture and Fathers attribute to Paradife, and why

why Men lived fo many Ages before the Deluge; but also why the Earth was more fertile then than now, and why all Vegetables and Animals of a more ftrong and better Constitution: For if the Earth was as we fay, what Order, what Disposition of the Air and Planets could be more fit to quicken, nourish, and increase the Seeds of all Things? What Sap, what nutritive Succus, what Nature, what Disposition, or Qualification of Earth, more apt to conceive, cherish, and maintain the Principles of Life? And where could they be more fafe from all external Injuries? So that at all Times of the Year Men had the Fruits ripe, the Trees green, the Fields flourishing, the Heavens ferene and clear, without Thunder, without Storms, the Rivers fweetly running, the Air charmingly calm, and a found, healthy, fecure, and a long Life.

You may object, if our chief Reason proving the right and direct Situation of the antediluvian Earth, be true, why has not the main Body of our present postdiluvian Earth, which is also carried (in our Opinion) in the Ecsiptick round the Sun, by the Motion of its liquid Heaven, its Axle likewise parallel to the Axle of

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the faid Eclyptick, and both its Poles equally inclining to the Sun, as well as the antediluvian Earth, fince nothing hinders it, as being in a Free Medium? I answer; because our present postdiluvian Globe being broken and torn afunder in time of the Deluge, is neither an equal, uniform, and homogenial Body, neither is its Center of Gravity and Magnitude the fame; and consequently however it hangs in a free Medium, it cannot have its Axle parallel to the Axle of the Ecliptick, but must hang more of the one Side, than on the other, to wit, of that Side where its Extremity is heavier; and the more free the Medium is, the more it must hang so, and the greater is the Difficulty in altering its Situation.

You may object again; if there was no Vicissitude of Winter and Summer before the Deluge, the Earth being directly situated to the Sun, then the Heat wou'd be very immoderate, and disagreeable both to the Fruits of the Earth, and to the Pleasure and Delight of human Life. I answer, that this does not follow, for by the same Reason and Cause that the Vicissitude of Seasons was taken away, the Nights were made equal to the Days throughout the whole Year: So that the

Sun making no long delay over the Horizon, could afford no immoderate Heat to the Air, or Earth. Wherefore feveral of these Causes which moderates now the Heat of the Sun in the torrid Zone, would do the same before the Deluge, if necessary. In the torrid Zone a certain gentle Gale of Wind perpetually blows from the East to the West, and besides that, the Sun does not delay much over the Horizon; the Twilights are there very little and short, wherefore the Inhabitants fall fooner into the Shadow of the Night, and they continue longer in it. Besides, in Night time they are very deep in the middle Shadow of the Earth, so that the Air about them cannot be reach'd to either by the Light, or by the Heat of the Sun. Wherefore, the Sun not continuing long over the Horizon; the deep Shadows of the Night; the Vapours condensed by the Cold of the Night, falling down plentifully in a Morning Due, moistening and refreshing the Earth; the open Trees; the Plenty of Rivers, and Streams; and a continual pleasant Wind, mightily refresheth the Regions under our torrid Zone. And fince before the Deluge, the Heat of the Sun might be repressed by M 2.

all, or several of the aforesaid Causes, in case it were immoderate, the Consequence is, that by reason of the right Situation of the Earth, the Happiness of them Days could not be leffened in the leaft. And truly, that any Region be pleasant and delicious, it must be somewhat hot, and that Heat must be again moderated, and fweetened; for the Remedy of an immoderate Heat is very agreeable. But notwithstanding all this, I do allow that feveral Regions of the torrid Zone before the Deluge, were unhabitable by Reason of the Heat, and that they were not fufficiently moistened, or flowing with any Water, or Rivers, as we shall shew hereafter; wherefore the Earth under the faid Zone was not covered then with Grass, or Herbs, nor shadowed with Woods, or Trees, nor moistened with much Dew, but altogether burned by the Sun, and turned into Sand and fandy Defarts.

Now, fince that Hypothesis must be true, which answers exactly all the Phænomenas to which it is applied, especially if they cannot otherwise, or in any other Hypothesis be well explained; and since the Phænomena's proper to the antediluvian World, to wit, a perpetual Tranquility,

Tranquility, Uniformity, and Mildness of the Air, Fruit at all times ripe, the Vegetables fappy and green, the Animals strong, healthy, and of a very long Life, the Earth cherished with an even heat of the Sun, and Men living for many hundreds of Years, with all that Scripture and the Holy Fathers fay of Paradise; fince, I say, these Phænomena's cannot be explained according to the prefent State, Condition, and Situation of Heaven and Earth, nor according to any other Order of Nature, or Hypothesis, that I know of, besides that which hitherto we have proposed, we cannot but conclude our Hypothesis to be true, or very near the Matter, or at least the best that hitherto has been found.

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#### CHAP, IX.

The outward Shape and Form of the antediluvian Earth was equal and entire, without Mountains, Seas, or Islands.

THE Affertion of the equal and entire Form and outward Shape of the antediluvian Earth plainly follows from what we faid, Chap. 6. being a confectary Position to what was explained there, and therefore we shall be brief in proving it; besides, that in the following Chapter we shall shew how all Mountains, Seas, and Islands were made, at,

or after the Deluge.

Antiquity in two manner of Ways witnesseth the Plainness, Equality, and Integrity of the antediluvian Earth, first, explicitly, secondly, implicitly, by lawful Consequences: such as made Collections of the Sayings and Sentences of antient Philosophers, and Writers, inserting them in their own Commentaries, tell us explicitly they were of Opinion, that either no Mountains were on Earth before the Deluge, or at least none but small ones, and not of the Bigness they are now of. Historia Scholast. cap. 34. says; there are some

some who think the Mountains were not so high before the Deluge, as now they are. Gloffa Ordinaria in Genes. vii. thus fays : there are who think that neither the quality of the Earth was the same, nor the Height of Mountains so great before the Deluge as now. And Alcuinus, who founded the University of Paris, and St. Anselms Master, Quæst. in Gen. Inter. 118. fays: There are some who think, that neither the Inequality of the Earth was such, nor the Altitude of Mountains so great before the Deluge, as they now are. And fince the Authors of which these learned Men speak, do not so much deprive the antediluvian Earth of Mountains, as they diminish their Height, that is to be attributed either to their Modesty or Ignorance; for fince the Mountains do not increase by success of Time, but grow less, they must have been very great, and extream high, in their Beginning; and the longer they continue, the more they fettle and fink down, and are either broken, or worn away infenfibly by the Violence of external Causes working on them. We have feen many who could witness that in the Days of their Fathers, and Grand-fathers, certain Towns and Castles that were on the Side of a Hill M 4

of the other fide of a Mountain, could not be feen, by reason of the Height of the interjacent Mountain, which afterwards in their own Time could plainly be seen, at least their Tops, the said Mountain finking fomewhat, or being wash'd away by Rain and Weather, and infenfibly worn. Wherefore the aforefaid Authors endeavouring to speak modeftly; and palliate in some Measure fuch a strange and paradoxical Affertion, as faid, that there were no Mountains at all before the Deluge, which feem'd very absurd and contrary to the vulgar Opinion, they durst not entirely take those huge Bulks away, but only extenuate, and deprefs them. And it was in this Sense, and for the same Reason, that Rabanus Maurus in Gen. 2. as Lippomanus cites him, speaking of that Fountain, or Spring, Gen. 2. v. 6. which fprung out of the Earth, and watered the whole Surface of the Earth, said, Tum in novitate terrarum, fi non omnia, plura tamen plana fuisse credibile est, then in the Newness of the Earth, it is credible that if not all, at least the most Part was plain and even. And venerable Bede, de fex dier. Creat. hath the same Words; for when he put the Question, how could the aforesaid Spring, water the Mountains? He faid;

it is to be known, that then in the Beginning of Things, if not all, at least the
most Part of the Earth was plain. And
truly if the whole Surface of the Earth
was watered by that one Spring, as Holy
Scripture says, that Earth could neither
have any Mountains, nor be divided into
Continents and Islands, as our present
Earth is. And this Text of Scripture,
Gen. 2. v. 6. Fons ascendebat è Terra,
irrigans universam superficiem Terra. A
Spring rose out of the Earth, watering
all the Surface of the Earth, is a sufficient
Warrant or us to say, there were neither Mountains, or Islands at that Time.

As for those Authors which implicitly by lawful Consequences infinuate, that no Mountains were on Earth before the Deluge, they are many; and particularly all those who say, that it did not rain before the Deluge, as now it does; as also those who say, that before the Deluge there was a perpetual Serenity, Mildness, and Equality of Air. And to omit profane Authors, I shall only bring down fome Christian Divines, and Expositors of Scripture, upon them two Texts, Genef. ii. v. 5. The Lord God did not rain upon the Earth. And Gen. ix. v. 13. My Rain-bow I will let in the Clouds.

Clouds, and it shall be the Sign of a Covenant between me and the Earth, which Authors fay, that it did not rain before the Deluge. Glossa Ordinaria, ad Gen. o. speaking of the Rain-bow, says; But because the Rain-bow is not made but of the Sun-beams and a moist Cloud, it seems that before the Deluge there was no Rain: Yet the Earth might be made fruitful by the Dew, and by the Inundation of Springs. Histor. Scholast. cap. 35. speaking of the divers Seasons of the Year after the Deluge, thus fays: Perhaps the four Seafons were not then (before the Deluge) so perfectly distinguished, because the Waters were not gathered together in Clouds until the Deluge came; but certain it is, where there is no Water gathered in Clouds there is no Rain. Rabbanus Maurus, cited by Lippomanus, fays, The whole Earth was watered by the Inundation of that Spring, of which, Gen. ii. v. 6. ana not by any Rain, after the same manner that Egypt is watered, and the Region of Pantapolis about Sodom was, of which Scripture says, Gen. xiii. v. 10. that it was watered like the Paradise of the Lord, end like Egypt; but we all know it does not rain in Egypt. Glossa interlinear. at them Words, Genef. ii. v. 5. and 6. God did

did not rain, but a Spring gushed, or role out of the Earth; says, take Notice, we do not read that it ever rain'd before the Deluge. Alcuinus Question in Gen. Inter. 135. puts the Question, whether it rained before the Deluge? He answers, it seems it did not, because the Rain-bow is not made but of the Sun-beams, and a moist Cloud: But it may be that the Earth was made fruitful by the watering of the Dew and Springs, as in Egypt. In fine, Lyranus in Gen. ix. asking how could the Rain-bow be the Sign of a Covenant, fince it proceeds from natural Causes? He answers thus: Some say there was no Rain before the Flood, nor consequently a Rain-bow. And truly (there are many) as fay, there was no Rain-bow before the Flood, must also admit no Rain, no rainy Clouds, before the Deluge, as now there are; tho' there might be Clouds, or Vapours and Rain, towards the Poles alone, as we shall say hereafter: But fuch as admit no Rain before the Deluge, must fay there were no Mountains before the Deluge; for wherever there are Mountains, there is Rain, fince by reason of their Coldness they draw together and curdle the Vapours, and fuch Clouds as dash against them, they condense

condense into Water. Likewise, such as affert the perpetual Serenity, and Equality of Seasons before the Deluge, must also affert there were no Mountains then; since the craggy, rocky, and uneven Surface of the Earth, and Tops of Mountains, hinder the regular Motions of Vapours, and causeth an inconstant Rain-

ing, and unequal Weather.

As for the Seas and Islands, they agree in their Origin with Mountains, and are the Monuments of the fame individual Ruin, as we shall shew hereafter: And if before the Deluge there were no Mountains on Earth, from whatfoever Cause, or Causes they afterwards proceeded, from the fame did the Seas, and Islands proceed. And truly, as for Islands, I am of Opinion, in whatfoever Orb there were no Mountains, in the same there were no Islands; for in all Islands, which are not new, and made by Art, there are great Mountains, or Rocks, and pieces of Mountains: And if we fancy the Main Continents, which are nothing but great Islands, to be without Mountains, there will be no running of Rivers, or Descent to the Seas. The Seas and Mountains are so inseparable in Nature, that if you take either of them away, or allow

low either of them, the other by Necessity must follow; neither can you Suppose the Surface of this habitable Earth to be plain and equal without Mountains, unless you suppose it to be an

entire Continent without any Seas.

And that the whole Earth was one entire Continent from the Beginning unto the Deluge, and that then it was torn to pieces, and a great Part of it turned into Seas, Josephus plainly says it, lib. 1. cap. 4. When God decreed to destroy all Mankind, and make up another kind of Men free from Vice, the Space of their Life being Shortened above that of the Antediluvians, and reduced within one Hundred and twenty Years, be changed the Continent into a Sea. He fays, that two new Things happened to this new kind of Men, or to the Postdiluvians, the Space of their Life shortened, and the Earth turned into a Sea, which before was one entire Continent. That Confanguinity and Derivation of all Nations from one Head, which Moses taught us, and Christian Divines confirmed afterwards, much favours this Opinion of the Continuity of the antediluvian Earth: The first Mortals in one folid and continual Earth might eafily spread themselves up and down.

down, here and there, and run all over the Globe of the Earth, especially since there were no Mountains, nor great Rocks, or unaccessible Places, separating Regions from one another, fo that in a plain and equal Surface, and without any Sea, or Lake, it was free for them to wander, and go where they pleas'd. But if the Globe from the Beginning was terraqueous, and full of Islands, as now it is, the first Habitation of the terrestrial Globe, and the Distribution of Men over all, and each Part of it, can hardly be explained, unless we admit so many Heads of Mankind, as there are Continents, and great Islands; and then all Men did not descend from Adam, but each Continent, each Island, had its own first Head, and particular Adam, contrary to our Faith.

You may fay that this does not follow, for they had the Conveniency of the Seas, to go from one Continent or Island to another, as Men now do. Answer: It is the received Opinion of all ancient and modern Writers, that the Seas were never tried by those of the Days of Old, and the Art of Navigation was entirely unknown to them: but if the Seas were open since the Beginning, and exposed to Navigation, is it credible that the Antediluvians

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Antediluvians for almost One Thousand feven Hundred Years would be fo stupid, or idle and flothful, that neither the Glory of new Inventions, nor Love of Knowledge, nor the Defire of finding out the Form, or Shape of the Earth, or feeing other Countries and People, could ever encourage any of them for fo many Ages, to attempt, or make the least Trial of the Seas? And that they did not attempt any fuch Thing, we are fully persuaded both by History, and the Thing itself; for we find that all that belong to Navigation are newly invented, if compared to that Age of the World; and a short easy Navigation might correct that great Ignorance of the People of Old, concerning the Seas and Land. In the Days of Old, it was the Opinion of all Men that the Earth was of a plain Figure, without any Convexity, which Error proceeded from the want of Navigation; for as it was easy to fall into such an Error on a Surface altogether equal, without Seas or Mountains, so it would be easy to get rid of it, if there were any Seas, and Navigation; for Sailers, even at a short Distance from the Land, may eafily take Notice of the Convexity of the Earth. Neither would the Figure mod w

of the Earth, and its greater Parts, be long unknown, nor Geography for rude and imperfect, if Navigation had place in the antediluvian World. How long, I pray, was the Motion of the Sea, or its constant Ebbing and Flowing unknown to the ancient People? The Doctrine of the Winds was to them strange, and altogether unknown; the use of the Compass was first found out some few Ages past. If the Antediluvians, or those that were in the Ark of Noah, had any Knowledge of these Things, why would they envy it to their Posterity? And fince fuch Knowledge would be very commodious and profitable to human Life, and of a daily Use, if once publish'd, it would never perish afterwards. Finally, if there were any Seas before the Deluge, why did not the Antediluvians, at least such as lived near the Sea-fide, take Shipping when the Deluge began, and fave themselves from that Ruin? Certainly if a Deluge happen'd this Day in our Country, many Thousands would escape the Danger by taking Shipping. But the Face of the Earth was before the Deluge far different from what it appears to be now; and therefore Noah's Faith is much to be commended, for believing God when

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when he foretold the Deluge, seeing there was not then, excepting some few Rivers, or sincams, one Drop of Water on the Face of the Earth; and hence it was that the incredulous People who lived then along with Wood in that World without Rain, and without Seas, did not in the least fear a Deluge, nor believe what Noah told them concerning it, and that for their Sins; nay when he was building the Ack, they laughed at him for contriving a new, and needles Machine, inever heard of before. And it is worth our Notice, that to build the faid Ship, or Ark, much more fimple than our present Ships are, God thought it necessary to give particular Instructions how it should be built, as well concerning the Materials, as the Form and Shape of it: And do you think, if there were any Seas or Ships before, that God would take all these Pains? It would be enough for him to tell Noah that the Deluge would happen fuch a Day, and that he should prepare one or more Ships with Provision and other Necessaries for it.

All this confidered, it is fit we should conclude with Moses, that the great Abyss was broken as afunder in Time of the Deluge, and not before; and that at the

fame Time, and by some Cause, the Mountains, the Seas, and the Islands were made, as we shall prove hereafter. And note, that Moses and his Commentators, and the Tradition of all Ages down, witness, that it did not rain before the Deluge, which implicitly is a Demonstration to me of our Assertion; for where there is no Rain, there are no Mountains; where there are no Mountains, there is no Sea; where there is no Sea, there are no Islands: Therefore where there is no Rain, there are no Mountains, Seas, or Islands.

worth our Norles, that the last the Ship, or Ark, the received our prefere and some continued to give articular the necklary to give articular the necklary how it should be not, as the form and Ship of it. And do you think if here would any Seas or Ship betore, the would take all these Pans of the word that all these Pans or the world for hom to seil head that the Dologe would happen that a Day, and that he should prepare one or more that with should prepare one or more that with a MARH. And other Necessaries and thould the with All this confidered, it is he should conclude with All it that the great Abys.

was broken afunder in Time of the De-

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# CHAP. X.

Of the Waters, and Rivers of the antediluvian Earth.

W E have faid hitherto that the antedi-luvian Earth was of a plain Convexity, its outward Shape and Form being equal and uniform all over, without Mountains, Hills, or Rocks, without Seas and Islands; but fince no Globe can be habitable without Water, and Water can hardly be without Seas, we find ourselves under a Necessity of shewing what Waters could be in the antediluvian World, all uniform and without Seas; from whence they proceeded; how they did flow; and where they ended. We are perfuaded that in the antediluvian World, by reason of its right Situation to the Sun, as we have faid, cap. 8. there was no Snow, no Hail, fince those proceed from a great fudden Cold; neither was there any Thunder, by reason it proceeds from the fall and meeting of frozen Clouds, clapping together. But as concerning Water, and fuch as may proceed from watery or moist Vapours, without any great Cold, the Case is different: For it is certain, N 2

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that Vapours must have been in the antediluvian World, the Heat of the Sun. being continual, and the outward Surface of the Earth, at least in the Beginning, moist and waterish; and as that Surface grew dry, fo the Sun-beams penetrated deeper and deeper, and at length out of the great Abyss underneath, they drew up into the Air vast quantities of Water. Yet I must confess that the same Heat of the Sun could not but hinder the Condensation of the said Vapours into Clouds: And no Mountains, or Inequalities of Earth being in them Days, which might squeeze, and press the faid Vapours into Clouds, such a Condensation could not happen, but by means of the Winds, and of the more cold Regions of that Earth, towards the Poles. Wherefore it is fit we should first examine the Nature and Course of the Winds, and Vapours in this antediluvian World, of which the Waters so much depend.

First, it is plain that the Motions of the Wind and Vapours in that World, were much different from those of our Days, and much more regular and constant, and never violent; for all such Things as are the Cause, or Causes of the inconstant, unequal, and violent Motions

of the Air in this our present World, have had no Place before the Deluge, when there was no unequal Action of the Sun on Earth, no Variety of Seasons in the Year, nor any unequal Form of the Earth in regard to Mountains, Hills, Seas, or Islands, nor any contrary, or quarrelling Winds. Secondly, it is plain, that the Motion and Course of Vapours in them Days, was towards the Poles, fince they had no Place else to go; for, being agitated under the Equator, and about the middle Parts of the Earth, and rarified by the Sun, they could not but extend themselves, and retire to more large Spaces on all fides; and fince the Air was more agitated towards the East and West under the same Equator, than towards the Poles, by Course it should more refift their Progress and Dilatation there, than under the faid Poles. Wherefore it is clear, that they should steer their Course towards the Poles, by reason of the less Rarefaction and Resistance of the Air on them fides: so that we may conolude, that the regular and constant Course of Vapours before the Deluge, was from the middle Parts of the Earth to its Extremities, or from the Equator towards the Poles. N 3

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In fine, fince the Extream or Polar Parts and Regions of the Earth, were much more cold than its middle Parts under and near the Equator, it follows that the Vapours being pressed, or hurried thither, and growing faint and feeble in their Motion by degrees, by Force of that Cold, they were condensed into small Drops, and then by their own Weight, fell down to the Ground in a continual Dew, or small and mild Rain. I faid, in a continual Dew, or mild Rain, for the Action of the Sun in raifing up the Vapours, being continual and equal, and nothing that could hinder their Course towards the Poles, or their Condensation there, it seems plain to me that about the Poles there was a perpetual Spring, and an endless Treasure of Celeftial Waters, which falling down in a continual dropping, watered the Surface of the Earth. So that in the antediluvian World, all the Waters fell from Heaven, that is, from the Air; and from these heavenly Waters all the Rivers of the Earth took their Origin, still running with a mild, gentle, and equal Course; and fince they did not tumble violently through Rocks, Precipices, or uneven Ground, nor run like violent Streams

Streams increased by sudden Floods, they afforded themselves very easy and commodious for all human Defigns, to render their Fields fruitful, and water their Gardens, being eafily drawn to all Sides and Parts, as the Use or Pleasure of Man required. And it is this great Treasure of Water, and waterish Clouds about the Poles, which Mojes means whenever he makes mention of the Celestial Waters. or of the Waters above the Firmament. before the Deluge; for to place Waters above the Heavens, or Firmament, in any other Sense, does not agree with Astro-

nomy, or Natural Philosophy.

Now there remains another notable Difficulty, of the Course and End of these Waters, Dew, or Rain, that fell about the Poles: For it is well known that the Water does not flow but by fome Declivity, and fince we suppose the terrestrial Globe before the Deluge to be plain and equal, why should the aforefaid antediluvian Waters flow rather towards this fide than the opposite? Why should not they consist immoveably in the fame Place where they fell? Or at least why should not they extend themselves from that Place where they fell, like an overswelling Pool, equally dilating N 4 them-

themselves of all Sides, without directing their Course more of the one than of the other fide? And moreover the' we might fancy (however that could be done) that they did direct their Course from the Poles towards the middle Parts of the Earth; when they came thither, what became of them, or how did they discharge themselves? We know that our present Rivers and Streams, are difcharged in the Sea, or fometimes in Lakes, or Loughs which communicate with the Sea, either over or under Ground by fubterraneous Passages; but the antediluvian Rivers had no Passage into the Sea, or great Abyss, which was closely shut up of all Sides. And if the faid Rivers difcharged themselves into Lakes, or Loughs, they would certainly overflow, unless they had either above, or under Ground where to go: Therefore they should stand in one Place, not having where to go nor where to end.

I must confess it would be very hard, if not impossible, to explain the Motion and Course of the Primigenial Waters, if the antediluvian Earth were persectly spherical; but since we proved it to be of an oval Figure, it is manifest that the Polar parts of that Earth were higher than

than the Equinoctial, or middle Parts, as being more remote from the Center; for the more any Part of a Globe is distant from the Center; the higher it is; Wherefore the Waters which fell about the Poles, should flow towards the medial Parts of the Earth, as by an infenfible Declivity, and water the most part of the Surface of the Earth. And tho' the Surface was equal and uniform, and the faid circumpolar Waters overflowed of all fides; yet they must have found, or made in that Declivity, fome particular Ways for themselves lower than others, or fome small Channels and Paffages, which by degrees they increased, and by means of which they were made up in Rivers and Streams, continually flowing towards the Equator. 'Tis true that in the Beginning, this Running and Course of Waters towards the Equator, was more large and irregular, the Drains, or Channels not being as yet made either by Use, or human Art; and if in any Place fuch finall Channels, or Pasfages were wanting, the Waters would stand for a little Time there, and swell into calm, pleasant, delicate Lakes; from whence afterwards they would take their Courfe towards the middle Regions of the Earth.

Earth, and in their Course often meeting with one another, they would swell into greater Rivers. And this much of the Course of the antediluvian Waters.

Now the Question is, when did they end? For, when flowing, they came to the middle Regions of the Earth, what became of them? Where did they unload themselves? Answer: They being divided into several small Branches, were partly confumed into Exhalations by the Heat of the Sun, under and about the Equator, and partly foaked up by the dry gaping Earth. Which the better to understand, note, that the Declivity of the Earth was less near the Equator than in the Places more remote, as plainly appears by the Nature of its oval Figure: Wherefore when the Waters came thither, they began to flow much flower; and by reason of this their slow and feeble Motion, as by their Channels being very shallow, they were easily divided into many Branches, and little Arms, as we fee it often happens at the Mouths of Rivers. For no Declivity being there, or at least but very little, there could be but a very finall Cavity, if any, and the Waters flowing, as it were, on the bare Surface of the Earth, might eafily be diffipated, Earth.

diffipated, and drawn to divers Parts, and many small Channels, much after the same Manner as it happens to the Blood in our Bodies, when conveyed from the Heart, for after a small Progress, it straggles here and there by so many small Branches, and Conduits, which at length are lost in the Habit of the Flesh.

Note, also, that the antediluvian Waters never coming altogether to the Equator, or to the middle of the torrid Zone. that middle Region of the torrid Zone was destitute of all Moisture, and being exposed for the whole Year to the Sun, directly hanging over it, became extream dry, and vehemently parched; wherefore being turned into Sands, into dry and thirsty Ground, it suck'd up the approaching Waters like a Spunge. And these two Things being thus prenoted, we may eafily understand how the Waters and Rivers of the antediluvian Earth flowed. and ended; for being variously distracted and dispersed over the Face of the Earth, about the end of their Course towards the Equator, they vanished away, partly by the Heat of the Sun and Earth, and partly were fwallowed up by the dry and thirsty Sands. And this much of the Origin, Course, and End of the Wa-

ters and Rivers of the primigenial Earth. And tho' this Doctrine feem fomewhat new and fingular, yet it does not want altogether Examples even in this our present Globe. They tell us, that the River Euphrates, or an Arm of it, vanisheth away after the same manner, being confumed, or wasted by the Heat of the Sun, and swallowed by thirsty Sands. And as for the Origin of the antediluvian Rivers, we have something like it in the Inundations of the River Nile in Brypt, and other fuch like Rivers: For in those Regions where it does not rain, as in upper Egypt, and the Regions of Lybia, the Vapours which are drawn up by the Sun steers their Course towards the Mountains, and the neighbouring cold Places, as in the antediluvian World they did towards the Poles; where they are condensed into Rain, or restrained into Snow; and at certain Times of the Year, in which this annual Condensation of Vapours into Rain, or Resolution of the Snow happens, the Nile into which the Snow, or Rain falls, swells and overflows the neighbouring Regions.

We shewed in the precedent Chapter, out of our own Divines, and Expositors of Holy Writ, that it did not rain before

fore the Deluge, that is in the inhabited Parts of the Earth, for the Places under and next the Poles, neither were, nor could be inhabited, by reason of the continual Rain (tho' mild) which fell in them Parts without Intermission. as we have faid before. And in my Opinion, that Paffage of Holy Scripture, Gen. ix. from the 11th to the 18th verse, which speaks of God's Covenant with Noah after the Flood, that the Deluge would never happen again, and the Rainbow which he gave in Sign thereof, fufficiently demonstrates that it did not rain in the inhabited Parts of the Earth: for if it had rained, doubtless a Rainbow now and then would appear, being a natural Effect of the Sun-beams falling upon, and reflecting from a rainy Cloud; but a Rain-bow never appeared before the Deluge: therefore before the Deluge it never rained. For if a Rainbow had appeared before the Deluge happen'd, how could it after the Deluge be a Sign that it never should return again? I don't understand how it could be a Sign of that, after the Deluge, more than before it.

You may fay, it was not a natural Sign, naturally fignifying of itself, but a

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Sign at Pleasure, or as the Logicians call it, Signum ad placitum, or exinstituto. But besides that this seems to diminish much the Force of the Covenant, and Sign given, as also the strength and native Signification of them Words, fuch a Sign at Pleasure, or by Institution, could not be a fufficient one, if it were not new, or fome new Thing added to it upon this Occasion, by means of which it might acquire the Notion of a Sign: For if God had faid, I promise you Noah that the Flood shall never happen again, and in Sign of this my Promise and Covenant, behold the Sun in the Firmament, or behold I place the Sun in the Firmament, would this be properly faid? For the Sun, which was in the Firmament before, fince the Beginning, and also then, when all the World perished by the Deluge, how could it be faid that it was placed then in the Firmament by God, when the Covenant was made, and that too in Sign that no Deluge would ever happen again? When God gives any Sign either in Heaven, or on Earth, of any Prophecy, Promife, or Covenant to be fulfilled, it's requifite that it be done by fome Novelty, mann Holl To a serie

or strange Thing, or other, or by some Alteration in the Course of natural Things, by means of which he witnesseth that he can, and will stand to his Promise; as when the Shadow returned backwards ten Degrees in Achas's Dial, 4. Reg. 20. v. 11. It is, I fay, requisite that fomething extraordinary be done, and above the common Course of Nature, fo that the Phænomenon be in fome manner new; for if the Face and Courfe of Nature be still the fame, and unchang'd, it can fignify nothing new, either of God's Side, or the thing fig-Wherefore I cannot induce my felf to believe out of the aforesaid Words of Moses that a Rain-bow ever appeared before the Deluge. And the more, because it fully agrees with what we have faid hitherto, that in the inhabited Regions of the Antediluvian World, there was no Rain, no waterish Clouds; and consequently, that no fuch Phænomenon appeared to the Antediluvians. Likewise what Moses said before his Defeription of Paradife, Gen. ii. v. 5, 6. feems to infinuate the unraining State and Condition of the inhabited Antedi-Invian Regions, The Lord God did not rain

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rain upon the Earth, but a Spring (others need a Vapour, others a Mist) arose out of the Earth, nontering the subole Surface of the Earth, to wit, the Vapours of which we spoke above, and which the Sun drew up plentifully in Daytime, some of them falling down plentifully by Night-time, (the rest driven to the Poles) with a moist, delicate and grateful Dew, sprinkled every Morning the Grass and Herbs, as it happens even this Day in many intermediate Regions of the Earth, where seldom or never it rains, and where Rain-bows are never seen.

You may ask, whether any Rain-bow, was framed before the Deluge, under, or about the Poles, where we faid it continually rained? I say not; and tho' there had been, it's nothing against us, for these Regions being not inhabited, tho' a Rain-bow were framed there, it did not appear, none being there, it whom it might appear, and consequently it was as if there were none. And for this reason I absolutely say, there was no Rain-bow framed about the Poles, for a Rain-bow being nothing else, but the Sun-beams restecting from a rainy Cloud

Cloud to our Eyes, where the Sensation is made, if there be no Eyes to receive that Impression of the reslecting Sunbeams, there can be no Rain-bow; after the same manner we said in our Philosophia Vetus innovata, part. 2. disp. 8. quæst. 2. where there is no Eye, there is no Colour.

ranifical, as we have hisherto balleiearly they're out of most anticor . Notes. ments, and Records; and times Linky Writ tells us that Man was exclud our of Plandile Into tome other Woll, or Region, and that a Cherman was placed at the Entrance or that Paralle, to binder Mankind troin going thicker again, ave may rightly conclude that the whole Earth is not to be underflood by the IV me of I and he, but there particular Trace only, or Region of the Eath, which belides the general paradifical Then the most common to the most part own through Phanomenas, proper to it Will alone, as that of the Tree of Life. of the Tire of Kinneldee, of Good and Evil, of the Chen on ville a fery Sword, of the River which inned out of Paradite, and offer led sate four Heads, Sc. Now in Question is, in what part of 2012

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In what Part of the Anteditionian Globe was the terrestrial Paradise.

HE most Part of the antediluvian Earth was in some manner Paradifiacal, as we have hitherto fufficiently shewn out of most antient Monuments, and Records; and fince Holy Writ tells us that Adam was expelled out of Paradise into some other World, or Region, and that a Cherubin was placed at the Entrance of that Paradife, to hinder Mankind from going thither again, we may rightly conclude that the whole Earth is not to be understood by the Name of Paradife, but some particular Tract only, or Region of the Earth, which besides the general paradisiacal Phanomenas common to the most part of the Earth in these first Ages, had its own particular Phænomenas, proper to it felf alone, as that of the Tree of Life, of the Tree of Knowledge, of Good and Evil, of the Cherubin with a fiery Sword, of the River which issued out of Paradise, and divided into four Heads, &c. Now the Question is, in what part of the

the whole aptediluvian Globe was this Tract of Ground, or particular Region fituated, which is called Paradife? To

which I answer:

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The terrestrial Paradise was situated in the fouthern Hemisphere of the Earth, or, (which is the same) beyond the E-quator; tho we do not find in what individual Part of that Hemisphere it was fituated. This Opinion is grounded upon three Reasons; the first is, that of all the divers Opinions of fuch Authors and Divines as placed Paradife in fome particular Region, or other of this known terraqueous Globe, not one anfwers in the least the Sacred History and Phænomena's of Paradife. The fecond is, that the faid Situation of Paradife in the fouthern Hemisphere fully agree with our Hypothesis of the antediluvian Earth, being divided into two Hemispheres, as into two divers Orbs, or Worlds, even according to the Sayings of the antient Heathens, Philosophers, Historians, and Poets. The third is, that all the antient Fathers, or at least most of them that ever determined the Region of Paradife, did place it out of our Orb, in as much as they fay that Adam was expelled out of Paradife into another Orb,

or that explicitly, they place Paradife in another World, or, as others say, beyond the Ocean; or that they understand by the flaming Sword, the torrid Zone; which three Reasons we shall now make clear. As for the first, we have sufficiently shewn, chap. 2. that the Opinions of such as place Paradise in some particular Region, or other of this Earth, as in Mesopotamia, or elsewhere, are not consistent with the common Notion and Phænomenons of Paradise; nay, that no Paradise could be on Earth in them Opinions. Wherefore we have only the two last Reasons to urge.

The first of them is, that the Situation of Paradise in the southern Hemisphere, fully agree with our Hypothesis of the antediluvian Earth, being divided into two Hemispheres, as into two divers Orbs, or Worlds, even according to the Sayings of the most antient heathen Writers: for according to our Hypothesis, the primigenial Earth was divided into two Orbs, not only by an imaginary Bound, such as the Equator is, but really, and by Nature itself distinguished from one another, as being unsociable, and not joined, or united, by any Commerce in the least: which therefore may be well called

called two Worlds. These two Orbs, or Worlds, were nothing else than two Hemispheres of the same terrestrial Globe, the fouthern and the northern Hemifphere, or their temperate and habitable Parts, being disjoyned and entirely sepa-rated from one another, by the interposition of the torrid Zone, by means of which there was no Passage from one Hemisphere to the other: for the Situation of the antediluvian Earth being right, in regard! to the Sun, as was faid, chap. 8. and no Waters, or Rivers reaching to its middle Parts, as is faid, chap. 10. these middle Parts, as they were altogether unhabitable, fo they could not be practicable or passable in any manner, by reason of their insufferable and insuperable Heat and Dryness, by means of which they became desolate and waste Land, or rather Sands, and Defarts. And this Division of the terrestrial Globe by means of the said insuperable Heat, Sands, and Defarts, which really happened to the antediluvian Earth, being rashly, and without any further Grounds, applied to this our present terraqueous Globe, gave beginning (as I think) to that old common Opinion of the unhabitableness of the torrid Zone; as also 0 3

to that other old Opinion of the diffinetion of Worlds in this our present Earth; to wit, of this part of our Earth wherein we live, that is, of this fide of the Equator; and of the others called Antiethona. These were according to our Hypothesis, the true Form, Shape, and Conditions of the Antediluvian Earth, which afterwards by the Deluge being diffolved, and torn to Pieces, as also its outward Situation to the Sun being altered as now we fee it, along with the intolerable Heat, and Dryness of the torrid Zone, ceased, tho' the Memory and Report of the Thing continued, without any change or amendment, still among Posterity ignorant of its Causes; as also remained the Memory and Report of the two Worlds separated from one another, not fo much by the torrid Zone, as by the main Ocean. this being taken notice of, will give great Light to understand the old Geography, and the Doctrine of antient Writers as well concerning the torrid Zone, as the Distinction of Worlds, in this Earth. But let us hear the antient Writers.

It is well known that all Writers of old afferted the torrid Zone to be unhabitable, and impassable; witnesses to this are, Aristotle, Cleomedes, Achilles Ta-

tius,

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tius, Cicero, Strabo, Pomponius Mela, Plinius, Macrobius, and all the Poets. And as for the Division of the Earth into two Worlds, and two kinds of Men, by means of the faid torrid Zone, or of the main Ocean, there are others which testify it; Cicero in Somnio Scipionis, says, You fee the Earth as if it were crowned, and girded with certain Girdles, or Zones; of which you see two far distant from one another, and at both Ends grown fiff with Frost; (the two Poles,) But that middle and most great Girdle, burned by the heat of the Sun : (the torrid Zone) Two of them are habitable, of which one being the southern, such as live there, do press their Steps quite apposite to yours, and are nothing belonging to your kind. The same thing Macrobius fays, lib. 2. cap. 5. Tho' there be two Zones allowed to Mortals, by the Gods, yet they are not both granted to Men of our kind, but the superior Zone only is inhabited by all Mankind that we can know, whether they be Romans, Grecians, or of other barbarous Nations. But that inferior Zone is known only by understanding, in as much as we think it is also inhabited, as being of the same Temperoteness; but by whom it is inhabited we could never know, neither will it ever be allowed us to know : For the torrid Zone being

being placed between us, it does not suffer any Commerce, or Passage betwixt both kinds of Men. Plinius also, and Pomponius Mela, after diftinguishing two Orbs inhabited, but without any Passage from the one to the other, they represent them to us as two Worlds: The middle of these two Earths, Jays Plinius, lib. 1. cap. 68. right under the Sun, is burned with Flames of Fire; of both Sides they are babitable, but so that they have no Passage to one another, by reason of the burning of the Sun. And what does that Antictbong of the antient Writers mean, but a World opposite to us, or another Earth oppo-site to ours? It is certain they do not mean the Antipodes, or the Earth of the Antipodes by it, but the fouthern Orb, and its Inhabitants, as Pomponius Mela fays, lib. 1. cap. 1. The Earth being divided from the East to the West into two Sides, or Parts, which are called Hemispheres, is distinguished into five Zones; the Heat annoys the middle Zone, the Cold the two extream Zones, the rest are habitable: The Anticthons inhabit the one, we, the other. What can be faid more clear to this Purpose? Therefore the Anticthons are those that inhabit foutherly of us, that is, from the Equator to the fouthern, or Antartick Pole, and not the beine Antipodes.

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Antipodes. Plinius also says, lib. 6. cap. 22. that the other World of the South, is called Antiethona, when Taprobana fays he, was thought another World of the Earth under the name of Anticthona, which Region Hipparcus call'd, as Mela tell us, lib. 3. cap. 7. pars prima alterius orbis, the first Part of the other World. In fine, (omitting many more) Achilles Tatius, Isag. in Ar. Phen. c. 29. plainly distinguisheth between the Antipodes, and the Anticthons, saying, those who live in the same Hemisphere bence to the North, and thence to the South, are called Anticthons, but fuch as live in divers Hemispheres, over or under the Earth, are called Antipodes. And it is those Antiethons that St. Clement meaned by the World, or Worlds, which he placed beyond the Ocean, as St. Hierom, or Jerom, noted upon these Words of St. Paul, Ephes. 2. v. 2. Secundum sæculum mundi bujus: According to the Course of this World; we ask, says St. Hierom, what is that Paul Jays according to the Course of this World? Is there any other Course that do not belong to this World, but to other Worlds, of which St. Clement writes thus, in his Epistle, the Ocean and the Worlds which are beyond it. Nay, Origenes, lib. 2. Periarch.

arch .- c. 3. plainly call them Anticthons, citing this Epistle of St. Clement : Certainly fays be, Clement the Disciple of the Apofiles, made mention of those which the Grecians call Anticthons, and of that Part of the World, to which none of us can have access to, nor any of those that are there can come to us, and which he called Worlds, when be said, the Ocean is unpassable for Men, and the Worlds which are beyond it, who are governed by the self-same God. After the same Manner and in the same Sense, I think Virgilius Bishop of Salisburg, afferted another World; for he would be censured by the Church for teaching that there were Antipodes, but because he said there was another World, and other Men, under the Earth, to which there was no access; as appears by the Pope's Epiftle concerning that Matter to the Bishop of Moguntia. Bin. Concil. 1. 3. Sec. I. p. I.

Out of all this appears that the antient Writers divided the terrestrial Globe into two Worlds, entirely separated by the torrid Zone, or the main Ocean. And doubtless this Divorce and Separation of the two Worlds, was before the Deluge, tho' not by any Sea, or Ocean, but by the torrid Zone alone, as we have said

before.

before. Now I prove that the Holy Fathers, and Writers of our Church, afferted Paradife to be fituated in the fouthern World, or fouthern Hemisphere of the terrestrial Globe; and fince all these Fathers do not use the same Phrase, nor the same Proofs, we shall divide them into so many Classes, and such as use the same Phrase, or Manner of speaking and proving, we shall place in one Class.

The first Class is, of those who plainly teach the aforesaid Distinction of two Worlds, and place Paradife in one of them, but not in our Northern World; Moses Bar Cepha a Syrian Bishop, wrote a Commentary in the Syriack Language of the terrestrial Paradise above seven hundred years ago, which is the most antient Treatise I find written, and entire of that Matter; he often cites and praiseth St. Epbrem the Syrian, who flourished in the fourth Age after Christ, and who wrote a Commentary de Ortu rerum, containing many excellent, and fingular Things, concerning the Antediluvian Earth and Paradife, but the Commentary being loft, we have no more of it than what others were pleased to leave to Posterity in their Writings. The aforesaid Moses Bar Ce-

pha in the eighth Chapter of his faid Commentary, whose Title is this, whether Paradise was on this Tract of Earth where we now live, or in any other? Thus fays, fince we have shewn that Paradise was on Earth, and not in Heaven, now we must diligently fearch, whether it was in thefe Regions of the Earth where we Mortals do live, or in other Regions. Wherefore we do declare that the Earth is but one, and of the self-same Nature, yet that Earth where Paradise was, was much different from this Earth of ours, not truly in its Nature or Substance, but in rarity, and denfity. Let us therefore divide the Earth into two great Parts, of which one is the Earth of Paradise, and the other without Paradise; the former subtil, delicate, sincere, and pure; the other where we live, gross, material, impure, and confused. The faid two great Parts, or Portions of the Earth, are the two Hemispheres, ours, and that of the Anticthons; in that, Paradife was, in this we live.

The faid Bar Cepha tells us also in many places, that the Ocean flows between these two Earths, or rather Portions of the one great Earth, dividing them both asunder; so in the 12th chap, whose Title also is, whether Paradise

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radise be on this Earth where we Mortals do live, or somewhere else? Thus he says: The Ocean surrounds this habitable Orb altogether, as a Crown surrounds the Head, or a Zone the Body; and yet beyond the extream Borders of this Ocean, that Earth lyes where Paradise was; and from this they think that Paradise was out of this babitable World. And in the end of this Chapter, he concludes thus: It appears therefore out of all this, that Paradise was situated out of this World where we live. St. Ephrem the Syrian, also taught that Paradife was fituated beyond the faid great Ocean, as Bar Cepha tells us, in the 9th. 14th. and 15th. chap. St. Hierom is of the same Opinion, with these Syrians, lib. 1. contra Jovinian. cap. 2. 9. and 16. and lib. 2. cap. 10. Origen also was of the same Opinion, bom. 31. in Num. But let us hear that great Divine Jacobus de Valentia, Exposit. in Pjalm. 71. who plainly says, that Paradife was fituated in the fouthern Part of the Earth; whatever manner, faid he, the Philosophers divide the Earth and Heaven, yet they all agree in this, that the fouthern Part beyond the winterly Tropick, is the more excellent and fruitful, because it lies under more noble Stars,

Stars, &c. this being supposed, I conclude, that Paradise of Delight, out of which Adam was expelled, was placed in that southern Part beyond the Dish of the

Sun, and both the Tropicks.

The second Class is of those who say that Adam was banished into another World, and that Paradise is very remote from our Orb. Sulpitius Severus speaking of Adam and Eve, thus says: Being placed in Paradise, when they eat of the forbidden Tree, they were cast out into our Earth like banished People. Upon which Words one of the Commentators says, Sulpitius understands, and speaks according to the Opinion of those antients who believed that Paradise was situated out of our World.

Eusebius in Orat. Constantini, and several others, along with all the Syrian Fathers say, that when Adam was banished out of Paradise he was placed in another World. And all such Holy Fathers as say, that Paradise is very remote from our World, mean the same; as St. Augustin, Procopius, Bede, St. Thomas of Aquin, and others: For, of the one side preserving still the antient Tradition of the Situation of Paradise, from which they would not depart; and of the

the other Side, being little inclined to acknowledge the Doctrine of the anticthonial Earth, they thought better not to name expressly either the one, or the other, but to say in sew Words, that Paradise was situated very remote from our World, tho' in Effect it is the same: for whatever is very remote from our World, where can it be, I pray, but in another World?

The third Class is of those Fathers who understand by the slaming Sword which was placed at the Entrance of Paradise, as we read, Gen. iii. v. 24. the torrid Zone; and consequently by that Paradise was situated beyond that Zone, or in the Touthern Hemisphere. These Fathers, and their formal Words, I have related above, chap. 2. and therefore think it needless to rehearse them here.

The fourth Class is of those who separate our World from Paradise by means of the main Ocean flowing betwixt them; and therefore placeth Paradise beyond the Ocean, which is the same as to place it beyond the torrid Zone, or in another Hemisphere: For antient Writers thought the main Ocean to be all spread between the Tropicks; and consequently whatever they placed beyond the Ocean, was

by them understood to be in another World, or in the Anticthonial Earth, or fouthern Hemisphere. Hence it is that several Holy Fathers afferted the fouthern World, or Hemisphere, to be altogether unaccessible, by reason of that main Ocean, as before the Deluge it was unaccessible, by reason of the torrid Zone. St. Augustin lib. 16. de Civit. Dei. c. 9. says; It is absurd to say, that any Men could sail from this Hemisphere to the other, through the Immensity of the unpassable Ocean. Wherefore a modern Author concludes thus : It was the constant Report of all Writers, even down from the Time of Clement the Roman, that there was an immense Ocean betwixt this northern, and the other fouthern Region, which no Man ever passed over, nor could pass. He says, from the Time of Clement the Roman. Because this holy Man named the Earth and People who are beyond that Ocean, another World, as we have faid above; and Origines called them Anticthons. From this followeth, that the Antients understood the fame by being beyond the Ocean, and being in another Hemisphere; and confequently that fuch as placed Paradife beyond the Ocean, placed it in another Hemisphere, or World. So Strabus Fuldensis, Gloss. in Gen. ii, says, wherever Paradise

Paradise is situated, we know it is on Earth, and most remote from our World, by reason of the Ocean, and great Mountains betwixt us and it. The same thing says Historia Scholast. cap. 14. in Gen. Paradise is a most pleasant Place, divided from our habitable Zone by a long Tract of Land and Sea. And if the ancient Heathens had any Knowledge of the paradifiacal Earth, they feem to infinuate it by their Elifian Fields, fortunate Islands, and the Gardens of the Hesperids; all which they commonly placed far from

our World beyond the Seas.

You will ask perhaps, if Paradise was in the fouthern Hemisphere, either beyond the Ocean, or beyond the Antihemisphere, how came Adam and his Posterity into this our northern Hemisphere? Moses Bar Cepha in his Treatise of Paradise, cap. 14. puts the same Question, and answers thus : Some of these Doctors who think Paradise to be situated beyond the Ocean, Said, that the first Men came from the Land near Paradise through the Shallow Seas into this our Hemisphere, being of a mighty great and high Stature; and this they endeavour to prove out of St. Athenafius and Ciril, who among other things wrote, that the first Habitation of Ada

Adam after leaving Paradise, was in Judea: Hence some Fathers say, that Adam was buried in Mount Calvary, and in the fame Place where our Saviour suffered. Afterwards the said Bar Cepha brings down the Opinion of others, say-ing: Others think that since the time Adam sinned, and was banished out of Paradise, until the Deluge came, all Mortals still remained in that Earth about Paradise, which is beyond the Ocean; and that this Earth where now we live, was entirely void of Men, and a plain Defart until the Deluge, &c. and the Author of this Opinion is Ephremsyrus. The first seems to me more probable, because if Adam and Eve being cast out of Paradife, remained always in the Land about Paradife, or in the same Hemisphere with it beyond the torrid Zone, then there would be no hindrance for them, or at least for their Posterity, to return again to Paradife when they pleased, as not being guarded by the Cherub with a flaming and turning Sword, by which we understand the torrid Zone, as we have faid; but if they were banished to our northern Hemisphere, as Athanasius, and St. Cirill fays, they could not return thither, the torrid Zone being unpaffable. You You will therefore easily believe, that the Almighty God, after banishing Adam and Eve out of Paradife, might soon translate them to any Place of the whole Globe, even to this our northern Hemisphere, over or through the torrid Zone, as well as out of the Limits of Paradise. And I am apt to think, that immediately after Adam's fall, the torrid Zone was not so impassable, as it was foon after, by the continual Heat of the Sun, which rendered it impracticable to Adam's Posterity, till after the Deluge. Neither could Adam himself or Eve return back again immediately to Paradife, not only by reason of the advanced Heat of the torrid Zone, which daily increased more and more, but by reason of the Fright and Astonishment they were at, when banished out of Paradise by the great Hand of God, and finding themfelves naked; fo that they would fooner fuffer Death than return again to receive a double Punishment. And according to this, we fay that the fouthern Hemisphere where Paradise lay situated, was entirely unhabited, and void of Men, till the Deluge came, as Ephremsyrus faid of this northern Hemisphere, where now we live. When the Fathers fay, P 2

that Adam and Eve came through the shallow Seas into this our Hemisphere, they understand by that the great Ocean of the Sun-beams, and heat of the torrid Zone, which therefore they call shallow; or they speak according to the vulgar Opinion of the Seas being since the Creation; or lastly, that they came through that Part of the dry Land, which now and since the Deluge, is covered with the Ocean, to wit, under the Equator, and about the torrid Zone.

One Thing may be chiefly objected against our Affertion in fituating Paradife in the fouthern Hemisphere, or in the antichhonial Earth: All the Holy Fathers, and Christian Doctors, who treated of Paradise, allow, that it was of a higher, and more fublime Situation, than the Surface of our present terrestrial Globe; and feveral of them fituated it in the lunar Circle or near to it: Therefore it could not be fituated on the Surface of this Earth, foutherly, or northerly. St. Bafil bom. de Paradifo fays; Paradise is a Place more high, and more excellent than the whole Earth, and wonderful in its Beauty, conspicuous of all Sides, not subject to Darkness, or Shadow, by reason of its Height. St. John Demascen.

mascen. lib. 2. de Orthod. Fid. cap. 11. Paradise is higher than all the Earth, of a temperate Climate, and of all Sides enlightened by a most subtil and pure Air. Moses Bar Cepha, cap. 9. Moreover we say, that the Earth in which Paradife is, was much bigher, and more lofty than this Earth where we live. And Stephen Gobar, in Biblioth. Photii. fays; Paradise was not in Heaven, nor on Earth, but betwixt them both : And as for those that placed Paradise in the lunar Circle, Strabo in Gen. ii. says, wherever Paradise is situated, we know it is on Earth, &c. situated on high, and reaching to the lunar Circle. Histor. Scholast. in Gen. xiii. Paradise is a most pleasant Place, &c. so high that it reacheth to the lunar Globe, Petrus Lumbardus, Master of the Sentences, lib. 2. dist. 17. says, wherefore they say that Paradise is in the East, and situated on high, reaching to the lunar Circle. Venerable Bede fays the fame. And Albertus Magnus, part. 2. Jum. Theol. tract. 13. quest. 79. says, that this is a very antient Opinion, whose Author is St. Thomas the Apostle; his Words are these: But this I say without Prejudice to a better Opinion : for I have read in some most antient Books, that the first Author

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of that Opinion, which is attributed to Bede, and Strabo, was St. Thomas the Apostle; to wit, that Paradise was of such a Height that it reached to the hunar Globe. Therefore Paradise was not on the Surface of this terrestrial Globe; or if so, it was on the Top of some most high Mountain or other, which reach'd to the lunar Globe.

Answer: I do freely allow that Paradife, wherever it was on the Surface of the terrestrial Globe, northerly, or foutherly, was much higher than the Surface of our present Earth is; for in time of the Deluge, the whole terrestrial Globe bursting asunder, and sinking down into the great Abyss, as we shall shew hereafter, its Surface now must be a great deal lower than it was then; nay, the Tops of the highest Mountains on Earth, are much lower now, than the plain Surface of the Earth was then: for before the Deluge happen'd, there was a wast empty Space, or Capacity, and of a vast Depth, betwixt the inward concave Surface of the Earth, and the upper Surface of the Abyss, the Waters that were there in the Beginning being soak'd up in Vapours, and drawn through the Pores

Pores of the fuperaqueous Earth by the continual heat of the Sun for almost One Thousand seven Hundred Years, especially under the Equator. Wherefore the Earth finking into the Abyss in time of the Deluge, the Tops of our present highest Mountains must be much lower than the plain Surface of the antediluvian Earth was. And this is what the Fathers mean, when they fay that Paradife was of a higher and more sublime Situation, than the Surface of our present Earth is. And when some of them fay, that it reach'd up to the lunar Circle, or Globe, by this they mean nothing but that the Height of Paradise surpass'd the middle Region of our present Air, or the Atmosphere of this our Earth; for the antient Writers were of Opinion the lunar Circle, or Globe, began from thence; fo Solinus in Polyhistore cap. 27. says, That the Mountain Atlas rifing from the great Sands, and reaching near to the lunar Circle, bides its Head above the Clouds. So they faid that the Mountains call'd, of the Moon, reach'd to the Borders of the lunar Globe; and also that Olympus reach'd to Heaven. And fince we teach that the MO Y

the plain Surface of the antediluvian Earth was much higher than the Tops of our present highest Mountains, the aforesaid Fathers say nothing against us, concerning the Situation of Paradife. Moreover, the ancient Fathers placed Paradife within, or near the lunar Circle, to let us understand that Paradise was void of all earthly noxious Vapours, and of all dark cloudy Air, not that really it reached up to the Circle of the Moon. As Dionis. Carthus. in Gen. Art. 19. and others, tell us: By reason, says be, that no Vapours were in Paradife, it is therefore faid to reach up to the hunar Globe. For the Fathers understood the fame thing by the lunar Circle, and to be void of all noxious earthly Vapours, and dark cloudy Air, fuch as now are about the Surface of our Earth; or, it was the fame thing with them to reach to the lunar Circle, and to pass the middle Region of the Air, as the Surface of the primigenial Earth did: neither did they affert any more of Paradife, when they faid that it reach'd to the lunar Globe, than what Lucanus afferted of Olympus, when he faid, Nupes excedit Olympus, pacem summa tenent. You

You may object again; if Paradife was fituated beyond the torrid Zone, in the fouthern Hemisphere, it should be as yet extant; but it cannot be found in any Place of that Hemisphere: Therefore it was not fituated there, neither is it now extant, contrary to the Opi-nion of Holy Fathers. Answer: Paradife was destroyed along with the rest of the paradifiacal Earth in time of the Deluge, by reason the terrestrial Globe altered then its right Situation to the Sun; Seas, Islands, Mountains, Hills and Rocks were made; and the Change of Seafons happen'd. But tho' it was then destroyed as for its constant Beauty and Pleasure, yet the Place or Space where it was, is still extant beyond the torrid Zone, whether it bedry Land or covered with Seas: And this only is what the Holy Fathers mean, when they fay it is still extant; to wit, extant as for its Place, or Space, tho' not as for its Beauty and Pleasure, or such particular Phænomena's as it had before the Deluge.

You may fay the Holy Fathers have taught, that Enoch and Elias were translated alive to Paradife: Therefore it must be

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extant even in its Beauty and Pleasure. Answer: I confess that Enoch and Elias were translated alive to some pleasant Place, or other, where they live as yet, and will till near the Day of Judgment; but whether they be in that same Paradise, from whence Adam and Eve were expelled, it is no Article of our Faith, neither do the Holy Fathers affert it positively; they only affert positively that they were translated, and translated alive: Tho' it be not, says St. John Chrysostom, Hom. 21. in Genes, a Matter of Faith whether Enoch be now in Paradise from whence Adam and Eve were expelled, or in some other pleasant Place, yet the Holy Scripture Say, that God translated bim, and that be translated bim alive, that he felt not Death. I say therefore, that Enoch and Elias were translated to some pleasant Place, or other, where they live as yet, and which may be called Paradife, by reafon of the Pleasures they enjoy there, whether it be in that Place, or Space, where Adam and Eve were before they finned, or in another, it fignifies not. And it might be also in the director.

the same Place where Adam's Paradise was, or thereabouts, and might be very beautiful and pleasant to them, God ordering it so, tho' in itself and in regard to other Mortals, it were but like other Regions of the Earth.

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# CHAP. XII.

How the antediluvian Earth came to be dissolved and drowned by Water in Time of the Universal Deluge.

7E shewed Chapter the 6th how the Earth took its first Beginning from the great Chaos, or mosaical Tobu Bobu; for that Primigenial Mass, after fome few Changes, became at last a firm and folid Substance, superstructed on the great Abyss of Waters, encompaffing them all around, which I called the antediluvian, or fuperaqueous, and first habitable Earth; where also we shew'd how well that System agrees both with facred and profane Writers. And truly I think it very reasonable, that the first habitable Earth, and Seat of Mankind, the first untouch'd and unspotted Work of God and Nature, should have a convenient and agreeable Form and outward Shape, not rough and horrible, with Caves, Pits and Precipices, with barren and unacceffible Mountains, Rocks,

and Stones; but with a regular, entire and equal Form, pleasant and beneficial in all, and to all. But after one thousand fix hundred and fifty fix Years, this primigenial and terrestrial Globe was diffolved, and deftroyed; and out of its Ruins arised this present terraqueous Globe of ours, as it now appears, or much to that purpose. For my Part, I think that by the Diffolution, and fall of the primige. nial Earth, superstructed on the Abys, the Deluge happened over the whole World; the Seas appeared; the Mountains also appeared on the Surface of the Earth; Cavities were made inwardly; Islands like fo many great Fragments of the Earth were separated from the rest; with all that we fee, and admire in the prefent natural Countenance of this Earth. or in its Construction. Which to prove, let us examine first by natural Reason, why, and how could the first superaqueous Earth be dissolved, and overflown by Water in a general Deluge.

But let us first hear the Opinion of some modern Authors, who think that Noah's Deluge was not Universal, but only over-flowing Judea, or the holy Land alone, or some other contiguous Region, and not

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the whole Surface of the terrestrial Globe; and on this Hypothesis, they say, the Deluge may be easily explained; for a much less Quantity of Water would be fufficient, which Nature could foon afford, whilst the impossibility almost of finding fo much Water as would overflow the whole terrestrial Globe, makes the Univerfal Deluge incredible. But the facred History of the Deluge, and natural Reafon shew the inconsistency of this Opinion: For, not only that the Universal Destruction of every living Soul, of which Moses speaks, could not happen in a particular Deluge, and that the Inhabitants of the Borders of Judæa might soon sly to the neighbouring Countries; but especially when Scripture fays, that the Waters furpassed the tops of the highest Mountains, it shews evidently that the Deluge did not overflow Judæa only, or any other particular Region alone, but that it was Universal. And that we might not interpret the faid Text fo, as if Moses spoke hyperbolically, to express some great Quantity of Water, tho' really not fo high as to cover the highest Mountains; the faid Scripture adds, that the Waters surpassed the highest Mountains fifteen Cubits, giving an exact

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exact Account of their Height, as if measured. Now, if the Waters surpassed the highest Mountains fifteen Cubits, how, I pray, could the Deluge be particular to Judaa alone, or any other particular Region? For certain, the Parts and Particles of Water do not stick close together when gathered up in great Heaps, as Timber, or Stones do, without a Vessel to keep them close together, but flow with the least Declination, and with an unfettled Motion run still to the lower Parts: So we fee a Stream, that comes from the foot of a Mountain, running through long Tracts of Land with a little-Declivity, and is never at rest till it reacheth to the Sea. And can any Man think that a great heap of Water, like a Mountain, could stand still without any barrier Stoppage, or Wall, at the Borders of Judæa, without flowing towards the lower contiguous Lands? This might truly happen by the infinite Power of God: But if we have recourse to this, we cannot want also sufficient Water to overflow the whole World with an Universal Deluge. Neither is Judæa surrounded with a Chain of Mountains that might, like Walls, or a Ciftern, keep in the faid Water; and if it

Waters surpassed the highest Mountains fifteen Cubits, the said Waters coming to the top of them Walls, or Cistern, should immediately run over the Brimdown to the lower Land, and never be the tenth part of a Cubit higher, than

them Mountains, or Walls.

Moreover, how could the Waters increase to such a height in one Place, and not, as they increased, expand themselves by Degrees all over the neighbouring Lands, fince Archimedes has clearly demonstrated that the Surface of the Water conforms itself to a spherical Convexity, and that each Drop draws as near the Center as it can? Wherefore all the low Places, and the Fields over the whole Earth should necessarily be overflown, before the least Hill, or Mountain could be covered by the Waters; and the lower Places being first filled, then the Waters would swell and rife up equally to the highest Places. In fine, where will you find that breaking up of the Abyss, or of the Fountains of the great Abyss, in Judea? What Track, or Sign of fuch a Rupture will you find in that Region, more than in any other Region of this Earth? And fince St. Peter

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t. 7 Peter fays, that the antient Heavens and Earth, which together he calls the World, perished by the Deluge, how can that with any likelihood of Truth, be understood of any small Region alone of this Earth? I am apt to believe that this Opinion never fully pleased its own Authors; but fince they had no Hopes of finding out Water enough for the Univerfal Deluge, they thought this Opinion less hard than the other, so that of two Evils they chose the lesser, as they fancied. Now to the Diffolution of the primigenial Earth, and general Deluge. The general Caufes of this great Diffolution, and Deluge, are noted as well by Moles, Gen: vii. v. 11. by the breaking up of the great Depth, or Abys, as by the Apostle St. Peter, in his second Epistle, Chap. iii. v. 6. when he fays, that the Earth and the Heavens of the old World, confifted out of Water, and through Water, wherefore that World being overflowed with Water, perished; to wit, it perished by reason of its Constitution, and it perished by Water: See what we said of this Text, pag. 66 to 70. But let us confider the Globe of the Antediluvian Earth, like an Æolipile equally warmed all round by the Sun-beams, Q

as with a constant Fire: See the fifth Figure, pag. 92. where the exterior Earth, 1. represents the Shell of the Æolipile, and the Abyss 2. represents the Water contained in it. The upper Parts of this Water, or Abyss, after some Ages, when the Heat and Force of the Sun penetrated to them, began to rarify, and be resolved into Vapours, and consequently to require a greater and more ample Space for their Motion and Expansion; and when the Vapours could not get out in fuch Plenty through the Pores of the Earth, that there might be Space enough left for the rest to exercise freely their Motions, they pressed more and more the Walls of the circumfus'd Earth, by reason of that narrowness. We must also note of the other Side, that the exterior Earth being continually exposed to the scorching Heat of the Sun, especially under the torrid Zone, in progress of Time became sapless, and dry; and its Parts by overmuch dryness contracting themselves, began to crack and gape afunder, and at length form'd wide Chasms. And no Winter succeeding (for then there was none) to redintegrate and refil themselves again, as it happens in our Days; after Years and Ages they **separated** 

separated from one another more and more; so that at length the bulk of the Earth being weaken'd and loosen'd of the one Side; and of the other, the Vapours being increased under the Earth, and dilating themselves with greater Force and Vehemency, the Earth at the decreed Time, after One Thousand Six-hundred and fifty-six Years, broke open asunder, and in Pieces, as if it were by an Earthquake; and its Fragments and Pieces fell down into the Abyss after divers ways, and with various Situations.

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This Manner of Diffolution of the Antediluvian Earth, admits in my Opinion of no great Difficulty, fince it happened much after the fame manner, as we fee in other Earthquakes, where the Vapours being collected, and inclosed in the Cavities of the Earth, when rarified and dilated, striving to get forth they throng and push up with Violence the Earth over them, which being first shaken, and after broken afunder, the Vapours going out, it drops down into the Gulf, or Pit; whether dry, or full of Water. Thus we read of several Cities and Provinces swallowed up, and according to the manner that they fall down, either they were entirely Q 3

tirely drowned, or fome Part of them remained to be feen above the Water. Innumerable Examples there are of Cities and Regions swallowed up after this manner; but two feem to me very memorable, because they are most antient, and because they draw very near to our prefent Argument. The first is that of Sodom and Gomorrha, which Holy Scripture mentions, Gen. xix. v. 24. 28. and the other is that of the great Atlantick Contitinent, of which Plato speaks in his Timæus, out of the Monuments of the Egyptians: Sodom and Gomorrha being first struck with Fire from Heaven, the Earth opened, and they were fwallowed down, where now the dead Sea is. Likewife by an Earthquake, and an Inundation following, that antient Atlantick Continent, greater than Libia and Afia, perished, as Plato fays: But I am apt to believe that this Fact of the Atlantick Continent, is but an old mistaken and imperfect Tradition of the Universal Deluge, and of the first Earth dissolved, and drowned; not only by reason of the vaftness of the Country said to have been thus drowned, and of the manner it perish'd, but also by reason of the Antiquity of the Fact, which surpasseth, as Plato

Plato says, all Memory, and even the Monuments of the Grecians. Whatever it be, after the same Manner that we conceive any City, Region, or Continent to be overthrown by the Rupture of the Earth, and swallowed up either in the whole or in part, by subterraneous Waters, we may also conceive that the whole terrestrial Globe, being broken in Pieces by an Universal Earthquake, and tumbling down into the Abys, the Deluge

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And that the whole exterior, or fuperaqueous Earth was broken then, and torn afunder, we have for Witnesses, both our Reason and Senses: It is evidently feen in the Face and Countenance of Rocks, and Mountains, that they are great heaps torn afunder, and in some narrow Seas, and great Rivers, we may fee the opposite Rocks of each Side anfwer so to one another, that you will eafily conclude they have formerly been joined together. It is well known to all Miners that the inward Parts and Bowels of the Earth are broken afunder in feveral Places. The torn Rocks, the Fragments of Mountains, the huge Stones, which are either found in the bottom of the Seas, or at their Coasts, shew nothing Q 3

but the Ruins, and ruinous Parts of the broken Earth. I need not mention for many Islands made by Divulsion, or pulled off from the Continents, or of the Continents torn and broken to Pieces, inwardly and outwardly, after a thousand ways; some of their Parts being lifted up above Measure, some sunk down after a wonderful Manner, and others gaping, or intirely disunited from one another. This Confusion, and disordered Situation could not have happened without a great Ruin, nor that Ruin without Fraction.

'Tis true, the Face of Nature as it appears in our Days, is not fo squallid, or like a Ruin, as it was formerly, when foon after the Dissolution of this Earth, the Wounds, as I may fay, were more manifest, open, and fresh: For now there is fome kind of Ornament and Equability of Surface added to it, by the feveral Improvements of Mankind; and Nature herself cloathing the Earth with Herbs, Grafs, Shrubs, and Woods, has covered its lesser Wounds, and besides has added a great deal of Beauty and Ornament to its whole Body. But if any Man will contemplate the true natural Idea of this terraqueous Globe, and from thence

thence frame a Judgment whether or no it be torn in its Parts, and altogether out of joint, he must draw off all those Ornaments of Art and Nature, and present to himself this Earth first intirely naked, as a Tree in Winter, not only without Cities and Towns, and all that human Industry has invented, but likewise without all that Nature afforded, either for Ornament, or for Use of Animals; and consequently without Meadows, Pasture, pleasant Fields, Groves, Woods, &c. remaining a rough, barren Globe, deformed with Rocks and Mountains. Secondly, to confider the Thing as it is in itself, the great Cavity of the Ocean must be drained, that he may the better perceive that huge deep Abyss, with its disorderly Furniture of Rocks, Stones, Pits and Islands. Thirdly, he must uncover all the Caves, Dens, and hollow Passages of the Earth, that he may the better fee all the inward Parts of the Globe; especially he must lay naked the Basis of each Mountain over the Globe, that he may have a Sight of all their prodigious Cavities, and Receptacles, whether fill'd with Fire, Air, or Water. All this being done, and having well confidered Q 4

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dered its most irregular and stupendous Form and Structure, I dare say, he will affirm to have before his Eyes the Rubbish and Ruins of a broken dissolved World. For my Part, when I think of it, I cannot but cry out, Great God of Heaven, If any natural Truth I do understand, or if Mortals be allowed to discern and give a right Judgment, the broken terrestrial Globe sunk down, and we

inhabit the Ruins thereof.

Note here, that tho' we explain the Diffolution of the antediluvian Earth, and the Reasons of the Deluge by natural Caufes, yet by this we do not deny but the Deluge happened, and was preordained as a Punishment for the Sins of Mankind, and that all its Motions were ruled by Providence: Nay, the infinite Wisdom of God shines much more confpicuous by this, that he makes the natural World agree fo with the moral, that the Order and Disposition of the former, may answer the Inclinations and Actions of the latter. St. Peter himself assigns the natural Causes of the Deluge, and Ruin of the old World, when he fays, in his second Epist. Chap. 3. Wherefore that World perished, to wit, by Reason of the natural Constitution of

of the antediluvian Earth, of which he spoke before. Neither do we bring down here all the Causes of the Deluge. For besides what we have said, Holy Scripture tells us that a great Quantity of Rain sell down from Heaven upon the Earth; so that the Earth being broken as under, as we have said, the Deluge happened, not only by means of the immense Quantity of Water which broke out of the Abyss, but also by means of the great Rain which sell from Heaven.

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Add as a Proof of this, our Opinion; that all Authors agree that the Deluge happened by the Eruption of the Waters of the great Abyss, or Thehom-Rabbah, over the Earth; but that Eruption was done by the breaking up of the Earth, as Holy Scripture infinuates, Gen, vii. v: 11. The Fountains of the great Abyls were broken up; to wit, by some great Violence, as fometimes Waters bubble up, are cast out, or gush forth violently when the Earth is broken in an Earthquake by Force of Vapours, and tumbles down: and fuch breaking up, and overflowing of Waters happened often in Greece and other places. Likewife the best of our Authors say, that by the Abys

Abyss or mosaical Thehom-Rabbah, we must not understand our Seas; for what would this fignify, the Fountains of the Sea were broken up? What Sense cou'd you make of it? Or to what Purpose? Moreover, our Sea can in no manner overflow the Earth, unless its Situation he changed, and that the Earth falls down; for it makes but one and the fame Globe with the Earth; and if all Mountains, and Heights were taken away from the Face of the Earth, the Plains as yet would remain as high as the Sea, and of a continuous Convexity with its Surface, as is well known now, for that obsolete Opinion of some (who do not deserve in this Point even the Name of Philosophers) who afferted the Waters of the Sea to be much higher than the Earth, because they gather together in a Heap, and fwell up about the middle of the Ocean, from whence falling down at the Time of the Deluge, and flowing towards the Coasts and dry Land, they overflowed the Earth; this Opinion I fay, is now exploded by all knowing Men. Who is so ignorant of the Nature of Fluids, as to admit fuch Swellings and Inequality of Surface in them? Who does not know

#### The Antediluvian World, &cc. 235 know that the Coasts are higher than the Seas, to which they reach by declining still downwards towards them, as well in Continents as in Islands? That the Inland places are higher than the Sea Coasts? And the Mountains higher yet than the inland Fields? The Sea therefore could not possibly overflow the whole Earth; and consequently it cannot be understood by the great Abyss, or Thehom-Rabbah, but some other vast Gulf of Water, nothing inferior to the Sea, to wit, our great fubterraneous Abyss, which only seems to me in the whole World, the sufficient Cause of the Deluge, and to which we must have Recourse for this strange Effect; fince all other Causes fail, both in Heaven, in Earth, and under the Earth, as we have feen, Chap. 1. and tho' there was Water enough, and fuperabundantly, in the great Receptacle, to overflow the Earth, if it were conveyed thither, yet it could not by any Means be drawn thither, as long as the Fa-brick of the old World, and the great outward Shell of the Earth, which inclosed the Water, stood entire. Neither would any small Breach, or Opening of the Earth be fufficient to convey

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the faid Waters, so that they might overflow the whole Earth; for they would not gush 'out, as the Blood does at the opening of a Vein, fince there was nothing that could force or drive them out, as is known to be in a living Body. But if we suppose the great Body of the fuperaqueous Earth to be broken to pieces, as we faid above, and that the great Heaps, and huge Fragments thus bursted afunder, and disunited, fell down into the Abyss, whose Waters being forced up, took Possession of their Place, it is manifest that an universal Deluge would follow from thence all over the Earth, great Parts of it being for ever after drowned, and the other Part for a while, as long as the violent Motion of the Waters continued; for tho' great Parts and Fragments of the Earth were fo disposed after the Eruption, that they were really higher than the Surface of the Abyss, yet in this most violent Toffing of the great Waves, and Billows, they rose up to such a Height fometimes that they reached the Clouds; and fuch was the violent, and terrible Motion of these huge Fragments and Billows, that the whole Body of the Earth and

and Water being in a full Convulsion, altered its Situation in regard to the Sun, and from a right direct Situation which it had before fince the Beginning, settled itself in an oblique and inclined

Manner, as we now fee it.

Neither is it to be admired, that this great Tumult and Swelling of the Waters continued for some Months; for besides that the Agitation of the Abyss was most vehement, by reason of the Violence with which the great Fragments tumbled down, very often as they were thus tumbling, many of them were by Chance disposed so, and ordered, that they formed huge Caves and Hollows, where a great quantity of Air was inclosed, which could not fuddenly get out, being hindred by the great flowing of the Waves; but as foon as the Waters could get into these Caverns, the Air going out by degrees, and that the Fragments were firmly fituated, then the Abyss began to subside, the Waves and Billows abated, and the highest parts of the Earth, or the Mountains, were first discovered: Then, after several Reciprocations, flowing and reflowing of the Waters, and to and from the opposite Land, the Waves at last growing smooth and

and calm, they rested entirely; and then the Earth took on its new Shape and Form, divided into Sea and Land, as we see it this Day; and the great Abyss, which for One Thousand six Hundred and sifty six Years, since the Creation, was hidden under Ground, was uncovered for the most part, which now we call the Sea, the rest of it being still hidden in subterraneous Caverns. And thus, the antediluvian World perished by Water; thus the Deluge happened; and thus succeeded our present terraqueous Globe.

Besides this Cause of the Deluge, to wit, the breaking up of the great Abyss, Moses assigns another from above, which was a vast quantity of Water, and Rain, falling from Heaven, which he calls the opening of the Flood Gates of Heaven, as he called the former the breaking up the great Abyss. We have faid, chap. 10, that all the Waters of the antediluvian Earth, came down from Heaven, and that they had no common Receptacle on Earth in which they might have been received, as our Seas are. We have also said, chap. 9. that there were no Hills, or Mountains on the Earth; wherefore if the Rivers of the antediluvian Earth had swelled by

any immoderate Rain, they might eafily overflow the Earth, whose Surface was all plain and equal. At the decreed Time therefore of the Deluge, great Rains falling, especially about the Poles, the Rivers and Lakes of the Earth rifed to a high Measure, and overflowed that equal and plain Surface. And as for the Flood Gates of Heaven which Moles fays were opened, that may eafily be understood either of a large Profusion of Waters about the Poles of the Earth. from whence they did spread to all other Parts; or of a certain Tempest, or Storm, much like that which they call Exbydria, and often happens in the Pacifick Sea, where it does not rain by Drops, as with us, but a whole Cloud, or Mass of Water is all at once tumbled, or rolled down, just as if these had been Flood Gates in Heaven, and that their Sluices. or Dams being taken away, a great Heap, and as it were a Flood of Waters would tumble down to the Earth. And I do believe that fuch a Torrent of Water fell down in Time of the Deluge, not only from under the Poles, but from feveral other Places, when the Air was heavy and overcast with Vapours, and Rain, feeing the Heat of the Sun

Sun was not sufficient to agitate and dissipate them, as before, nor to hinder them from being collected together into great and continual masses of Water, which sell like Rivers from Heaven, as if the whole Element of Air were condensed into Water: And from these two Causes, the one from beneath, the other from above, the Deluge happened, as Scripture tells us, Gen. vii. v. 11. the Fountains of the great Abys were broken up, and the Flood-gates of Heaven were opened.

Now, if we contemplate the whole Body of our terraqueous Globe nakedly, and as it is in itself, and as Philosophers ought to do, not like Orators striving to imbellish it, we shall find it a Mass, heapped together after a various, uncertain, and Arange Situation of Parts, without any Order, or graceful Disposition, divided into Sea and Terra Firma; in the Sea there are dispersed here and there, and that too without any Order, innumerable Islands, as so many Joints, or Limbs cut off a main Body; there lie huge Stones, and great Rocks; the Promontorys run into it; Gulfs and Bays out of it; and all this irregularly without the least Order. As

for the dry Land, the Mountains with their Valleys take up no small Part; the Plains and Fields another Part; and the rest is taken up with Lakes, Fens, Woods, Desarts, and what not? Without any regular Disposition at all. The inward Parts of this Earth are void and vacant in several Places, full of Holes and Vaults, especially towards the Mountains and Seas, where there are many Caves and Dens, and hollow Passages, with all sorts of Caverns, and this consused without any manner of Order.

Now, I pray, what Hypothesis besides our own, can well explain the Caufes and Beginning of all these Phanomena's and Circumstances of our terraqueous Globe? We can truly foon understand how they all happened, by the Diffolution of the antedituvian Earth, and its fall into the Abyts, after the manner we faid above: For, first by means of that Diffolution and Fall, the Earth would be divided into Sea and Land; the Parts which remained above the Waters after this Ruin, would make up the dry and folid Earth, and where other Parts were entirely swallowed up, by the Abys, there

there our Seas are. Neither is it strange. that fometimes Rocks, fometimes Islands are found there; for by the same Reafon that the greater Fragments which are raised and kept up, and have continued fo for long tracts of Years make the great Continents, which are nothing but great Islands, so the leffer Fragments, ordered and disposed much after the same Manner, that their tops appear over the Abyss, whilst their Foundations and Sides are continually washed by the Waters which separate them from the Continent, make the Islands or leffer Continents. These leffer Fragments are called Rocks, when they are of a small Bulk, or Circumference, and nothing but bare, naked, barren Stones, whether they appear over, or under the Water, and lie

In the Terra Firma, or Continents, according to the divers Situation, or greatness of the Fragments, the Mountains, Vallies, and Plains are made; for as the Fragments smoothly and equally laid, make the Fields and Plains; so when excessively sunk down, they make the Vallies, and raised up into the Air whatsoever way, whether they lean upon

upon one another, or whether they be firetch'd by one another, they make up the Mountains, and Chains of Mountains: So that all their Difference may eafily be explained by the various Difposition, Situation, and Bigness of the Fragments. In fine, as for the Chinks, Clefts, and Caverns of the Earth, they may also be easily explained by what has been said, for more, or less they happen in all Ruins and Downsals of Edifices: It cannot be, that great Fragments tumbling down in heaps irregularly, and in top of one another, be so suitably joined together, in all their Parts, perfectly agreeing so one with another, that no void, or vacant Spaces be admitted betwixt them, no gaping, or opening be fuffered in their Surface. Wherefore we must allow several Clefts and Cavities, and these of all Shapes and Sizes, both in the Surface and Body of the Earth, after that dreadful Dissolution and Ruin which happened to it. For my Part, I fee nothing in the whole Bulk and Shape of this Earth, whether inwardly, or outwardly, but what may be clearly explained in the aforesaid Hypothesis; from whence I conclude that it must be true, for that Hypothesis must be R 2

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taken for true, which exactly answers all the Phænomenons to which it was applied, especially if the said Phænomenons cannot be otherwise well explained; but the present Shape and Figure of our terraqueous Globe, with all its Phenomenas and Circumstances, cannot be otherwise well explained but according to our Hypothesis; which exactly answers them all, as now we have seen partly, and more particularly in the following Chapters.

ments tumbling down in heaps irregue hely, and in top of one another, be fo fuitably joined together, in all their larts, perfeltly agreeing to one with another that no word, on vacant Spaces be admitted betwixt them, no gaping, or opening be inffered in their Surface. Wherefore we must allow several Clefis and Cavities, and there of all Shapes and Sives, both in the Surface and Body of the Earth, after that dreadful Diffolution and Ruin which happened to it. For my Part, TAH Des in the whole Bulk and Shape of this Earth, whether invanily, or cuty rdly, but what may be clearly explained in the aforefaid Hypothelis; from whence I conclude that it must be true, for that Hypothetis must be · 7 raken

## The Amedilavian World, &cc. 245

differently to their Center, and our Hypotheir, Or their particular Physocomens

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Of the Subterraneous Cavities.

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TITHERTO we have shewed I partly how well our Hypothesis of the Dissolution of the antediluvian Earth agrees with the Parts and Construction of our present terraqueous Globe in general; and perhaps if we had to deal with ingenious Men alone, there would be no need of further Arguments to this purpose, nor of a longer Treatise to explain compleatly the Universal Deluge. But fince there are some who fo much abhor all Novelties, that they never can be induced to embrace any Truth unheard of before, unless they be overpowered with such Strength and Number of Arguments, as cannot be relisted; hence it is that to oblige them, I thought fit to add fomething more to this purpose, and examine a Part of the most famous Phenomenas of this Earth, and compare them diligently R 3

diligently to their Causes, and our Hypothesis. Of these particular Phænomenas I find four worthy to be considered: The subterraneous Cavities; the Ocean; the Islands; and the Mountains. All these, seem to me true Monuments, and manifest Evidence of the Ruin and Dissolution of the antediluvian Earth. Here we shall treat only of the first, leaving the rest to the following Chapters.

The Seas, Islands, and Mountains are exposed to the Eyes of all, and much admired by Mankind, but the Recesses and Cavities of the Earth, being for the most part hidden in its Bowels, and from our Eyes, few have applied themfelves to their Contemplation. The antient Heathens thought these Cavities to be the Receptacles of the Winds, appointing Æolus to keep them in, or fet them loose, as he pleased; others invented other Ends and Reasons for the faid Cavities, yet of no greater Moment than the former: But to whatever end, or reason they were made, its plain by innumerable Experiences, that there are fuch Cavities in the Bowels of the Earth. Some of these Caverns reach

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reach with their Orifices up to the Surface of the Earth; branched into various Windings and Turnings, which commonly are found in mountainous Regions. There are also several close Recesses stoved and altogether hidden in the Bowels of the Earth, and inacceffible, as is well known to all Miners. Sometimes fubterraneous Rivers are found, of which some never get clear of the Earth, but flow perpetually with a tacit Course under the Earth, until at long running they are swallowed up by fome fubterraneous Pool, or Gulf, as have been feen in feveral Mines, and particularly in the Town of Aquaviva in the Province of Bary, and Kingdom of Naples, where the Marquiss of Aquaviva's Servants digging for a Well in his Garden, happened to meet with a great River running under Ground from the West towards the East, never heard of before, whose Beginning, Course, and End is yet unknown, but what appears of it in the faid Garden. Other Rivers get clear of the Earth, after a long running and pursuing their Way thro' the dark Pipes of the Earth, whose Sources are not known. Some of our Rivers

Rivers in the midst of their Course fink into the Earth, emerge and appear again in another Place as if they were new Rivers; fuch was Lycus, and Arafinus, of which Ovid makes mention, Sic ubi terreno Lycus est epotus biatu; such is the River Niger, in Africa, Tigris in Afia, Alpheus, Guadiana, Rhodanus, and others. Likewise it appears by the rife of feveral Springs, and other Waters, both fresh, or salt, that there are many Caves and Dens and hollow Passages in the Bowels of the Earth, for fuch Waters to run freely through. In fine, there are feveral falt Lakes and Seas, which communicate with the Ocean under Ground. as the Caspian Sea, the dead Sea, and others; and fuch Lakes as receive great Rivers and emit none from them, and yet do not overflow, demonstrate that the Earth inwardly is full of Gulfs, and fubterraneous Passages. The Ocean itfelf shews the same, for in some Places it finks into the Earth with great Violence, as appears by its Vortexes, which draw to them, and fwallow all that come near them. To this may be added that the Sea never overflows. Stereid!

flows, notwithstanding that such and so many Rivers flow into it, of which one alone carries more Water into the Sea in one Year, than the whole Mass of the Ocean; nay, than the whole Earth, if we believe Aristotle. Truly, if the quantity of Water which is raifed up in Vapours by the Heat of the Sun, does not answer the Quantity which all Rivers and Streams carry into the Sea (as the learned Edmond Halley, ex Act. Anglic. an. 1688, mense Septemb. & Octob. and the Fellows of Oxford endeavour to shew they do) then doubtless great Part of the Water (for some must be raised in Vapours) must be conveyed through fome open Passages, and hidden ways under the Sea into fome deep fubterraneous Cavity, and perhaps run again some other Way through the Earth, to supply the same or other Rivers, from whence they first ran into the Sea. But these are bare Conjectures: This is certain, that as there are some great Receptacles of Waters in the Bowels of the Earth, as if they were great Seas; so there are narrow Seas, and Sounds, and Lakes, and Rivers, and Streams, or fomething

like them, as we have on the Surface of this Earth. And fince wherever we dig to any great depth, we find Water, it is very reasonable that we should affign an Universal Cause for such an Universal Effect; which we sufficiently do by afferting that the inferior Parts of this exterior Region of the Earth, stands in the midst of Waters; and if there be any Cavity, or vacant Place betwixt them Parts, it is suddenly filled with Water; and by that the rest of the solid Earth, inasmuch as it is passable by Water, will be moistned. Now the Cause of this interior Conformation of the Earth, and of all the Phenomenons which belong to the fubterraneous Waters, are eafily affigned in our Hypothesis, as followeth.

We suppose, as has been explained, Chap. 6. that the whole Region of Waters, or the great Abyss lay under the superaqueous Earth; which Abyss is now discontinued in several Places by the great Fragments of the Earth which sell down into it; and as the greatest Part of it lies now open and unconvered in the Ocean, and other Seas, so it is more than credible that several

several other lesser Parts, or Portions of it, lie betwixt the Ruins of the Earth, as being discontinued by the said Fragments falling on top of one another, with the Interception of feveral Cavities, very often like Vaults. The Waters of these Receptacles communicate for the most part with one another, and with the Sea; and that, either by open Conduits through which Streams and Rivers might pass, or by blind Passages and dark Pipes; and if you dig deep into the Earth, Water will certainly appear; much after the same manner as we see in our own Body, for according as we prick a Vein, or the Flesh, so the Blood will either copiously appear, or will sweat out by little and little. And thus the Course, and Rise of the fubterraneous Waters are explained, both in regard of their Causes, and of their Receptacles.

There are also dry Cavities in the Bowels of the Earth filled with Vapours and Exhalations; as may easily be proved by so many Earthquakes, and fiery Mountains casting out Flames, and combustible Matter. And as there is a great Quantity of Exhalations required

to shake such a huge Bulk of Earth, as we know to have been often shaken in forme Earthquakes, when entire Provinces and Kingdoms trembled; and to cast up such huge Stones and Fragments of Rocks, as Ætha, Vesuvius, and other ignivomous Mountains do, toffing them into remote Regions; and to force out a great Quantity of melted metallic Matter like a Flood, and other ponderous and folid Substances; as, I fay, these Motion's cannot be caused without a great Store of Exhalations, so the Cavities in which they are contained, must be wide and ample, stretched far and nigh: Which we know to be too true by many most dreadful Examples, when the Earth being broken up by fuch violent Motions, it swallowed entire Towns, and Cities, and fometimes Hills and Mountains. Such Examples are very common in History: Plinius tells us, that in Tiberius Cæsar's Time, twelve Cities were overthrown in Afia by an Earthquake in one Night; we have seen in our own Days, several Villages, Towns and Cities in the Kingdoms of Naples and Sicily, turned upfide down in few Minutes,

Minutes, by Earthquakes. Fournerius tells us of an Earthquake which happened in Peru about his own Time, which in less than half a quarter of an Hour overlet Cities, Mountains, Rivers and all; and that for three Hundred Leagues along the Sea Coasts, and Seventy in the Main Land. In fine Orotius speaks of an Earthquake which shaked the whole Globe of the Earth.

We read also that whole Islands were not only overthrown by Earthquakes, but that they entirely difappeared, for the Arches and Pillars on which the Bulk of them was founded. being shaken and broken, they dropped down into the Abyss. Such new Islands as are made by Divulfion, or Separation from the Main Continent, proceeded for the most part, from this, that all the furrounding Land was fwallowed up into the great Abyss: For when new Islands are made of any Tract of Ground which was joined before to the Continent, we must not think this to have been done by the Swelling of the Seas, or Violence of Waves overflowing the intermediate Land betwixt

that Island and the Continent, without a Fall, or finking of the faid intermediate Land; for if that intermediate Land flood still after the same manner, and that the Sea only overflowed it by an Inundation, then that Branch of the Sea dividing of fuch Land from the Continent, would be shallow and fordable, which very feldom happens; nay fuch Branches of the Sea, are commonly extream deep: Therefore their Bottom were not covered with Water, by reason of any Inundation, but by being funk down into the Abyss. Also new Lakes both of falt and fresh Water, sometimes appeared after such Earthquakes, the Earth being swallowed into the Abyss; and that perhaps soon after the Deluge, some Gulfs in the Seas were made after the fame man ner; and not only that, but feveral other Inundations and great Changes both of the Earth and Seas, happened more often in those Days than down near our Times: For the Earth being then newly diffolved, the great Frage ments that tumbled into the Abyss; not as yet well fitted, or fettled to gether, but leaning upon one another very

very irregularly, as on weak, unfteady, or ill fixed Props, which failing by what Cause soever, a new Ruin and Sinking of the Earth followed; and according to the inward or outward Conformation of those Fragments and Tracts of Earth, either a new Island was made, the Istmus being funk, or an old Island was swallowed, or some City or Region of the Continent tumbled into the Abyse, some great Inundation still accompanying such Ruins. But in Progress of Time, when the Fragments of the Earth joined after a more firm and folid Situation, their broader Sides leaning on one another, they very feldom moved, or tumbled, but when jogg'd by some great inward Violence. I should never end if I treated of all the Heads and Arguments that prove the Body of this our terrestrial Globe to be inwardly torn, and full of Cavities. In the Continent, or Terra Firma, as they call it, there is hardly any Thing firm and continent: in all Places void and vacant Spaces, either interspers'd, or heaped together; in all Places Caves and Cavities, under the Seas, under the Rocks, under the Moun-

Mountains, and also under the Fields, where the Earth at the running of Horses, Carts, or Coaches, make very often a loud and hollow Sound; and in all Places the Parts and Limbs of the Earth put out of joint, and pluck'd asunder: so that if we could but penetrate into its inward Parts, and see all its Bowels, we would perceive with great Horror, that vast Bulk from one Pole to the other, or from our Feet to the Antipodes, to be miserably worn away, gaping, and yawning, all over full of Caves, and Dens, and hollow Passages.

To accommodate all this to our Hypothesis; tell me I pray, who will believe that what we have hitherto spoke of, was done after that manner by the most wise and potent God at the first Formation of the World, and that they remained so since the Beginning. To what Intent or Purpose? What notable Prosit, what Beauty could Nature expect from such an ugly, rude, and disagreeable Construction? No Man can say that the Earth is more beautiful and fair for being sull of Caves, Dens and hollow Passages, for opening asunder in many Places.

Places, for being torn in pieces, and frightful in its Cavities, and vacant Spaces, and these without Rule, Form, Order, or Disposition, and which contains nothing but Darkness, and Filthiness, from whence ariseth stinking pestiferous Exhalations, Earthquakes, and publick Ruin. Moreover, how, or by means of what Cause, or Causes the Earth was made hollow by fo many Cavities in the Beginning? To fay they were made at the first Formation of the Earth is not enough, but you must tell us how, and by what Cause. If we consider the manner of its first Formation from the Chaos, we shall find the contrary to be true; for the gross Particles falling then to the Bottom of the Abyss, and framing the Body of the subabyssian Earth, that subaqueous Mass could not be but entire, continual, and folid of all Sides, its Parts being compressed with their own Weight, and with that of the superincumbent Waters. Neither can we imagine how any Cave or Vacuity however fo fmall, could remain among the faid Parts; for fuch Vacuities could not avoid being filled with Water, or with

with Air, and each of these being lighter than the Earth, it follows that according as the Particles of the Earth fell towards the Center, and moved here and there, in that great Liquid, so that Water and Air should by Necessity give them place; and then by an equal Concourfe and Distribution of the faid Particles of all Sides, the Body of the Earth could not but become a folid, undivided Mass, void of vacant Spaces, of Caves, and Cavities, But in our Hypothesis of the Dissolution of the antediluvian Earth, it is easy to explain the Reasons and Causes of all the Caves, Cavities and horrible Confractions of this our Earth, as we have faid, which are inexplicable in any other Hypothefis, and confequently ours is the most likely to be true: and whether it be true, or not, at least it cannot be denied, that the faid Effects, Phenomena's and Circumstances are such, and of fuch a mariner as if it were true.

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Of the Ocean, and of the Form, Conditions and Causes of the Sea-Gulf.

wards to defend the fame. And as DY the Word Sea-Gulf I do underfland that huge Space, or Cavity which contains the Waters of the Ocean. or Seas, not inafmuch as it is filled up with the faid Waters, but inafmuchas it may be considered in itself. without any Water. As for what concerns the Waters of the Sea no Man doubts them to be as antient as the Earth itself; we think them to be Part of the old Abyss, and therefore wonder not that antient Writers call the Ocean by the Names of Tartarus, Barathrum, and Abys, for such Names are proper for the Primigenial Abyss. But we do not speak here of the Origin, Nature, Conditions, or Causes of these Waters, but of the marine Vessel, Cavity, or Sea-Gulf which contains the faid Waters; and which when S 2

when I consider naked in itself, utterly emptied of all Waters, I cannot but be aftonished at the Hugeness of the Thing: What Hands ever framed, or attempted to make a Channel of fuch a terrible Capacity? Of whose Sides in many Places there are great Mountains and Rocks cast up, as Bulwarks to defend the fame. And as we cannot but admire the Greatness of the Sea Gulf and Mountains, fince our World has nothing like, or comparable to them; so we have no Reason to admire the Elegancy of their Structure, or the Order of their Parts, fince no regular Disposition, nothing of Art, or Order appears either in the one, or the other; neither do they resemble the Workmanship of Causes acting with Sense, or Reason, but the Effects of Cafualty, or of meer natural Causes; and this itself not of the new, first, and instituted Nature, which is more regular and orderly in her Effects, but of a decayed, ruined one. But omitting to treat here of the Mountains, which deserves a particular Chapter, we shall only consider the Origin and Phænomenon's of the Sea Gulf, or marine Vessel. No

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No other Origin, or Caufe can be found (in my Opinion) of this vast marine Cavity, but the felf fame, which was the Cause of all other Cavities and Gulfs of the Earth, as we have explained in the precedent Chapter, to wit, that it is a Portion, or Part of the antient Abyss, not filled with any Fragments of the Earth, but with Water, or Air, according to its lower or higher Situation. And tho' other Cavities be for the most part subterraneous, and thut up, and the Sea Gulf wide open, and greedily gaping, this does not hinder it to proceed from the same Cause; for, that one Cavity be open, and the other not, depends only of the Situation of the Fragments which we shall explain hereafter. And this Cavity, or Sea Gulf being extream deep could not but be filled with Water; for there are hardly any deep Cavities which are not fo filled. In short tho' it be much bigger than all other Cavities, furrounding the terrestrial Globe with a huge Extent, neither does this hinder in the leaft : for, as concerning its Bigness we do allow a Capacity much bigger, to wit, that

of the great Abyss, of which the Sea Gulf is but a small Portion. And as for its Continuation round the Earth. that is a mere Casualty, not at all requisite for the Constitution of the Sea; for, if the four great Seas, the Atlantick, the Pacifick, the Hiperboreal, or Northern and the Southern Sea, were separated by dry Land, they would not therefore cease to be Seas; as the Caspian Sea, tho' outwardly separated from the Ocean, yet it is a true Sea, as well as Islands are true Land: And it is very probable that immediately after the Deluge the Ocean was not fo entire, and all in one, as it is now. it is the fame thing to us; for, whether the Ocean did furround from the Beginning with a continual Tract the terrestrial Globe, or whether it was interrupted here and there by fo many pieces of Land, as the main Continents are interrupted by the Rivers and Lakes, that depended entirely of the manner of the diluvian Ruin, and of the Situation and Continuation of those Clefts and Partitions, by means of which the antediluvian Earth bursting afunder, tumbled into the Abyss. Nothing therefore

fore hinder us from concluding, that the Sea Gulf is an Opening, or a Difcovering of the great Abyss, even down to the Bottom; the Fragments of the Earth being so raised upon the Continent fide, and preffed down of the other, that they could not reach the middle, where the Gulf must be very deep. But note that we speak here of the main Ocean, and of its middle and deepest Parts, which commonly are of an unsearchable Depth, and which therefore I call the Abysis of the Sea, whereever they happen. They may truly happen fometimes in some particular Gulfs and narrow Seas, as also betwixt Islands, and near fome Shoars; to wit, when a Fragment is raifed up after a steep and precipitious Situation, and as it were perpendicularly, whether it happened for of one Side alone of the Cavity, or of both fides together; for fo in a small Distance or Space, the Bottom of the Abyss may be left naked without any Fragments on it. Likewise, near the rocky Shoars, very deep Cavities are commonly found, for the same Reason; which also happens sometimes in the Baltick Sea, betwixt the American Islands S.4

Islands and the Continent, and in other Places. On the contrary, fometimes in the main Ocean there are places found which are not fo deep; where a great Fragment of the Earth happened to fall down entirely; and also an Island may appear there, by reason that two or more Fragments, or pieces of great Fragments joins fo together, that their Tops appear over Water: But these things feldom happen, for commonly in the midst of the main Ocean, there are no Islands, and the Waters are very deep; as on the contrary, in particular Gulfs and near the Shoares there are many Islands, and the Water not fo deep, as Experience sheweth. Now let us examine the Causes of the Sea Gulf, with its Form and Bigness.

If we consider further the Depth of the Sea Gulf, or its Breath and Distance betwixt the Coasts, or its spreading towards all other Parts, it is of a huge greatness. The Pacifick Sea is stretched at length under the Equator 150 Degrees, and much longer yet towards the Poles; the Atlantick Ocean is very great; and no Man knows the Bounds of the Northern and Southern Seas. But this is allowed by all Hands, that the Surface of the whole Sea, is not less than

The Anteditionian World, &c. 265 than the Surface of the dry Land; Wherefore if we take but the common Depth of a quarter of a Mile, as we did before, cap. 1. the Capacity of the Sea Gulf will be 4639090 Cubick Miles. Now, what Herculeous Labour would be requisite to make such a vast Hollowness, or Emptiness, or such a huge Cavity in the Earth? What Strength either of Art, or Nature, could be able to do it? And where shall we find a Cause for such an Effect? If this great Sea Gulf were immediately made by God alone, we would for certain find fome Order; Disposition, and Proportion in its Shape and Form; which we do not find, but all things in a Confusion, irregular, and ill proportioned, as we shall shew hereafter. And as for any second, or natural Cause, there is none that either alone, or in conjunction with others, would be able to rend, and tear fo in Pieces the Body of the Earth, as to make that great Cavity of which we speak. We may easily think that the Channels and Cavities through which Rivers and Streams run, were by Degrees made deeper and larger by their

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continual flowing; also the Sinks or Receptacles of Lakes and Pools (unless they be truly Abyssian and of the same Date with the Sea) are nothing else but Places more low than the neighbouring Land about, or certain Vallies, in which there are feveral Springs, or into which as into Cifterns, the neighbouring Rivers and Streams unload themselves, and the Depth is somewhat increased by the Weight and Motion of the Waters. But that most vast Gulf and Cavity which contains all the Waters of the Ocean, Mother of all Rivers, Fountains, Lakes and Rain, could not proceed from fuch flight Causes: No running of Waters, no fall of Rivers, no diuturnal Attrition, or Confumption of Parts, could ever wafte away the whole half of the Surface of this terrestrial Globe, and make hollow its firm and folid Bulk to fuch a Depth.

And to prove this the better, let us remember that in the Beginning the whole mass of the Earth lay under the Waters when each Element took its Place according to its Nature and Propension, as our Adversaries allow. Now let any Man explain, what Cause, or

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Causes, made that huge Cavity in the folid Mass of this Earth, sufficient to receive all the Waters which covered the whole Face of the Earth. We do not speak here of God, or of any theological Cause; for we spoke sufficiently of this, chap. 6. but of natural Causes, which must either be external, or internal; there was no external Cause to be found, but the Waters themselves which covered this folid Mass, and defended it from the Injuries of other Causes; but these Waters could not make the great Cavity of the Ocean: For tho' the subaqueous Earth might well be moistened and softened by the fuperincumbent Waters, and that something of it might be wash'd away by them, yet this being equally done all over the Surface of that Earth, by reason of the equal Motion of the Waters in all Places, yet could never make any Cavity in one Place more than in another; and if by Chance fometimes any little Vallies happened to be made, the Motion of the Waters beating and dashing more towards the Sides than the Bottom, would foon again level their Banks, and make them

them equal with the rest of the Earth. As for internal Causes, none can be affigned, but either Exhalations, or fubterraneous Fire, or Water; but in case there were fuch in that folid subaqueous Mass, yet this prodigious Work of the Sea Gulf, could not be done by them: For the Fire which is more powerful than the rest, never effectuating any Thing comparable to this, even in those Regions where for many Years and Ages it has constantly work'd most outragiously, as in the Kingdoms of Naples, Sicily, Island, and other Places; neither did it ever make such like Cavities in the Earth, nor ever bursted up the same, so that it added new Cavities to the Ocean. Moreover, if the Sea Gulf were made by fuch fubterraneous Causes, it could not be made but by degrees, partly in one, partly in another Age, and fo all along down to our present Times, by a continual Action of the faid Causes; but the greatest Cavity of the Ocean was always perfect, and entire, as it is this Day, from the first Memory of Men and Histories after the Deluge: For, tho' we, or our Forefathers, might have

have feen fome Ishmus or other broken up, or fwallowed down, or fome Region or other overflown with Waters. how little I pray, is that, in comparison to the huge Cavity of the Ocean, which truly is immemorable in regard to its greater and deeper Parts? Wherefore we may conclude that this vast Sea-Gulf was made all at once and with one fatal Blow, in time of the Deluge. when the superaqueous Earth was diffolved and the Fountains of the great

Abyss broken up.

As for the Form and Shape of the Sea-Gulf, it has none but a confused one; it is altogether irregular and unequal in its Depth, Breadth, Coasts and Shoars. If the Ocean had a regular and uniform Situation all over this terrestrial Globe, we would easily believe, as being induced to it by the gentle Order and Elegancy of the thing itself, that it is the work of the first upright established Nature: Or if the Cavity of the Sea were not so deep, but somewhat shallow, and not very much lower than the rest of the Earth, we might perhaps fancy, as others do, that it proceeded from some Fluctuation, or other Inundation ·sels

Inundation of Waters; but its immense Bottom, so disordered, confused, rugged, and craggy, and in all manner of ways fo deformed, shew the Monuments and Rubbish of some huge Ruin, or other, and not the Effects of any other Caufe; for, however, or from what Place foever we look on that great Marine Cavity, we shall see nothing, but the Face of Confusion and Disorder. In the Bounds and Tracts of the Sea-Shoars and Coasts, there is nothing uniform, nothing regular; they go in a Line uncertainly crooked and broke, indented and jagged, with Promontories, Creeks, Bays, Harbours, or contiguous Islands, as you may fee in all our Maps. Neither is the Form and Shape of the faid Sea-Coasts less various, and uneven: In fome Places they are low, smooth, and even, and as if they were levelled with the Surface of the Sea, being stretched into fandy Plains, that the Waves and Billows of the Sea feem to be restrained by no other Bounds, but by the only convex Figure of the Earth; in other Places they are raised up on high like so man ny Bulwarks against the Violence of the

the Waves, so many huge Stones and vast Rocks being heaped up by, and upon one another, whose Roots very often reach the bottom of the Sea, whilst their tops approach the Clouds; some leaning upon others, variously laid together, variously torn in Pieces, steepy, easy, craggy, smooth, not agreeing in any Form, not placed in any Order.

Neither are the inferior Parts of the Sea-Gulf, lying hidden under Water, less unequal and confused, as we may guess by so many great Rocks, Vortexes, Quickfands, deep and shallow Places, which are found there. 'Tis true, that the Greatness and Deformity of the Sea-Gulf is not used to be fully considered, because its Deformity is for the most part hidden from our Eyes, under the Water, and its Greatness cannot be comprehended all at once with one cast of an Eye; neither do we use to spend our time much in confidering things that do not strike our Senses, or move the Affection of our Mind. But if any Man hung in the Air, and would look down earnestly on the great Cavity of the Ocean, the Water being taken away, he might fee that

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that great Bottom very horrid and rough, with huge Stones and Rocks, here a great Depth, there immense Vortexes, in another Place fordable, in many Places with its Sides open, and pierced through with vast subterraneous Recesses, and in short, all deformed, all ugly, all rough, horrible, and dreadful. Doubtless the Sight thereof, would foon move him to think eagerly what might be the Cause of such a prodigious Chasm, of that monstrous new Chaos. He would certainly ask, who opened first, and enlarged the Mouth of that great Abyss? Who tore afunder, and who threw down into that Bottom, the huge Stones and Rocks which I fee there? What Strength, what Power, what Violence broke to Pieces the inward folid Earth. and where are its ejected Bowels gone? Who dug through the Sides of the Sea-Gulf, opening fuch great Gaps, making fuch wide Cavities and Paffages. even to the most inward Part of the Earth? Who first fortified the Sea Coasts with such great Rocks and Mountains? Did our Forefathers, or the Annals of most antient Nations tell us any thing 2.00

thing of this? How, or what time was this done? Was it done all at once or by degrees? With what Strength, fince it is fo prodigious? By what Advice, fince fo confused? Doubtless this Man in the Air, might reasonably ask these Questions, and never find a fatisfactory Answer, but by attributing the said prodigious Effects to the more amazing Diffolution of the antediluvian Earth; which feem to me the only Key for the understanding of the Universal Deluge, as of all Phænomenons, Irregularities, and wonderful Inequalities, which are feen in the great Fabrick of our terraqueous Globe.

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CHAP.

#### CHAP. XV.

Of the Islands, and their Beginning.

A FTER discoursing of the Sea and A Sea-Gulf, it is fit we should consider the Islands which are always joined to the Sea, and may be as well faid Parts of it, as Rivers or Streams are faid to be Parts of the Land, There are two forts of Islands, Original and Factitious: I call Factitious Islands, such as are not of the same Age of the Sea, nor were from the Beginning of this our present terrestrial Globe, but in some Manner new, as being made afterwards, and proceeding from fome particular Causes. So sometimes by heaping and casting up of Sand together, or of some folid Substance, in a shallow Place, or fordable Branch of the Sea, there are Shelves, or Sand-Banks made, which when increased more and more, they become at length an Island. fome Shelves, or shallow Places be in Cuck

fuch a manner forfaken by the Sea Water, that their tops be apparent above Water, and their Sides, or Roots overflown, they take also the Name of factitious Islands. And after one of these two Ways, I think, all the plain Islands are made, which are void of Mountains, and Rocks. Sometimes also the Sea breaking in on the Earth, overflow the low Places all about, leaving the Mountains and higher tracts of Ground, as Islands. Moreover some Parts, or Tract of Earth, which run into the Sea, may be cut off the rest of the Land, the intermediate Part, or Ishmus, finking down, and swallowed by the Sea, as they fay happened to Sicily, which before was joined to the Kingdom of Naples by an Ishmus, from Reggio to Meffing, which Isthmus being funk, that narrow Passage for Ships was made, and Sicily, which before was a Peninsula, became a perfect Island; and after this manner craggy, rocky, and mountainy Islands may be made. In fine, it is not impossible, but sometimes Illands, or great Fragments of the Earth, might rife up from the bottom of the Sea; so they tell us that the Hland

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Island of Delos, the most famous of all the Cyclades, and the Island of Therafia, or St. Helen's Isle, which was after divided into two by an Earthquake, both in the Egaan Sea were made. And this (which deferves to be taken Notice of) plainly shew, that great Fragments of Earth do lie under the Waters of the Ocean, which are not continued, united, or lively joined to the bottom of the Ocean, but only laid over it, as one Stone, or Flag over another, and confequently feparable from it; and then by some Earthquake, or extraordinary rummaging of the Sea, might rife up on an End, or Side in the top of some other like Fragment, and appear above

But besides these Factitious Islands, however they happen, there are others of the same Date with our Seas, which therefore we call Original Islands, since they could not be made as the Factitious were. Such I think to be all Islands found in the main Ocean, betwixt which and the Continent, Part of the Abyss, or a Sea of an unsearcheable Depth is found; as the Island of St. Helena,

Helena, the Island of the Ascension, the Azores, and others; which being stony and rocky, could not be made of Shelves; or Sand Banks, and that in the most deep Ocean. And fince they are at a vast Distance from all other Land, being furrounded by the main Ocean, it is not probable that ever they were Promontorys, nor that the intermediate Places were made Seas by any bare Inundation, fince they are not shallow, but rather of an unsearchable Depth. Wherefore I think that these, and such like Islands, as also many others that are much nearer the Continent, are extant fince the time of the Deluge. Neither is this Opinion any thing fingular, for feveral Authors hold the same, to wit, that Islands were made in Time of the Deluge, tho' they explain the matter variously, according to the variety of their Opinions, concerning the Origin and Causes of the Deluge, and of this terrestrial Globe.

The Causes and Origin of Islands may easily be explained in our Hypothesis of the Dissolution of the antediluvian Earth, and of the Deluge ensuing: For since the Islands are nothing but small Con-

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tinents, and the Continents nothing but great Islands, both were done much after the same Manner, that is, the Continents were made of the greatest Fragments of the broken Earth, and the Islands of the leffer Fragments, or of the Fragments of the greater Fragments. The Reason of both may be more distinctly understood thus; In the Diffolution of the first superaqueous Globe, when the Fragments of the exterior Earth fell into the great Abyss, whatever Fragments, by reason of their Situation, were in any manner extant above the Waters, stood for a Piece of habitable Earth, whether Island or Continent. And fince there are but three, or four great Continents on our Earth, it is enough we suppose so many great Fragments; each of which being much wider and broader, than that it might fall down entire, by reason of the Air underneath, which could not get out with fuch Celerity, cracked and burfted in the middle Parts, which being raifed up by the Air violently rushing out, their other Extremities fell into the Ahyss, and when they struck against the Bottom, being much shaken by their immense

immense Weight, at the Violence of fuch a Fall, they broke again into feveral lesser Fragments, and Pieces of divers Bigness, and Situations: And among these Fragments such as altogether funk to the Bottom, made up all the Rocks and huge Stones which are in the Seas under Water; but fuch as were big enough, and fo inclining and leaning, one upon the other, that they might perfift above Water, composed fuch Tracts of Land as we call flands; and this feems to me the true Origin and Cause of all Original Islands.' And therefore we cannot admire that many Islands are found near the main Contitinents, as the Maldives of India, the American Islands, the Hesperides of Africa, the Cyclades in the Egean Sea, and others: And always Islands are found about the Coasts of great Continents, as in the Gulfs and Straits of the Sea, and very feldom in the main Ocean: But when this happens, such an Island is made of some particular Fragment, or other, altogether separated from the rest. Neither is it to be admired that in all original Islands, Mountains are found; for this Phænomenon, as well

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as the former, and all others which are observed concerning the Situation, and other properties of Islands, may be fully explained in our Hypothesis, as

we shall shew, Chapter 16.-

Several are of Opinion that the Islands were truly made in Time of the Deluge, yet not by any Diffolution of the Earth, or Disruption of the great Abyss, as we fay, but by means of a bare Inundation. Others fay that the Islands were extant before the Deluge, and that the Earth from the Beginning was, as we now fee it, with Seas, Islands, Plains and Mountains. And others afferting the Islands to be extant before the Deluge, fay, that in the Beginning the Earth truly was all in one Globe, but that foon afterwards it was broken and torn to Pieces into all these great and finall Fragments which we fee, by the great Hand of God, and that then the Islands were made. As to the Authors of the first Opinion, who say the Islands were made in time of the Deluge, and not by any Dissolution, or Difruption of the Earth, 'tis requisite first they explain what Form, or Shape they grant to the antediluvian Earth, when

when it was without Islands. They fay, that the dry Land and Seas were before the Deluge, but no Islands: Then they must confess that the Terra Firma in them times reached all along to fuch Places where now the Islands are; and that in time of the Deluge, and from thence down to our Days, the intermediate Places were overflown with Water. But this is altogether improbable, for the intermediate Places betwixt feveral Islands and the Continent are of an unfearchable Depth, altogether as deep as the middle of the main Ocean, which could not be, if they had been Terra Firma before, and now only overflown with Water. Befides, according to this Opinion, no Gulfs, Straits, or narrow Seas, which commonly abound with many Islands, (as we see in the Egean Sea) could be before the Deluge, when there were no Islands: and if there were none then, how came they to be made afterwards, if the Earth still remained the fame? Moreover according to that Supposition, 'the Sea before the Deluge was by the half less than

ours now. For Islands are not only found about the Continents, and that far enough into the Sea, and at a great Distance from the Continent, but also are found sometimes in the middle of the main Ocean: Wherefore it follows, that there is twice as much Water in this our present World, than there was before the Deluge, fince it fills up a Cavity twice as big. But how came this vast increase of Water in our Earth? Or how came so many Places to be now dry, as the Islands are, which before were filled with Water? Of what Side of the Islands which are in the middle of the Ocean, was the intermediate Earth overflown in time of the Deluge? And why of one Side then, more than another, or both? This Opinion might as well take away all Seas before the Deluge, as the Islands. In short, the same Reasons whereby we proved before, that there are some Islands which could not be made by any heaping of Sands, or Earth from under the Water, or by any Inundation of the intermediate Places, betwixt them and the Continent.

Continent, prove also that such Islands could not be made by any Deluge without the Dissolution of the Earth.

The fecond Opinion which fays that the Islands were extant before the Deluge, and that the terraqueous Globe was framed from the Beginning, as we now fee it, was fufficiently refuted, Chap. 1. where we shewed that the Deluge could never happen in that Hypothesis; as also, Chap. 5 and 6. by the Reasons and Nature of the first Chaos, out of which the fublunar World was made. And the third Opinion which refers all to God, and that this terraqueous Globe was immediately made for by him, is rejected, Chap. 9. to which we shall add the following Advice concerning the Recourse People have to the first Cause, or God, and to Miracles where there is no Necessity.

It is very common with many, when ignorant of the natural Causes of several strange Effects which they see, to refer all to God, as if there were no Medium, no intermediate Causes betwirt the first and the last Cause:

Cause; and the less we are instructed in the Knowledge of things, the more we are inclined to this Vice. The defire of Knowledge and Understanding, the Causes of things, is natural to all Men, which when they cannot attain to, they fancy there is no other but the first Cause, and so they equalize themselves to the most learned and most knowing of all Mankind, Thus truly they act well in defence of their own Ignorance, which by these Means they conceal in some manner; but they don't fo well in defence of the infinite Majesty of God, whilst incircumspectly they affirm that all Effects, Forms and Shapes of Nature, however so base and degenerating, proceed immediately from that most holy Idea of the Divine Mind. They should not refer rashly, without any Distinction all the Shapes and Forms of Nature to the supreme Offspring, there being many fuch Shapes and Forms, which are the Effects of a degenerate and corrupted Nature. All that immediately comes from the Hand of God, are good, beautiful, well disposed, and erdered, according to Weight, Measure, and

and Number: Why therefore should not the Shape and Form of this terrestrial Globe, coming immediately from the Hands of God in the Beginning; be of the same manner, when there was no Reason why it should deflect from that Order and Beauty? But when the animated World degenerated, it was reasonable, and the infinite Wildom and Justice of God required, that the inanimated World should also degenerate, as it did in time of the Deluge. In a Word, all the Holy Fathers and Divines agree in this, that we should never have Recourse to God, or to Miracles, either in finding out the Causes, or in explaining the Effects of Nature; for it would be unadvisedly done, whilst the Things might be fufficiently explained by natural Causes. Therefore, fince according to our Hypothesis, the Beginning and Progress, Form Shape of this fublunary Globe, as well before, as after the Deluge, as well in the whole, as in all its Parts, whether Seas, Islands, Mountains, Plains, &c. can be sufficiently explained, and a natural

natural Reason and Cause assigned for each of them; why should any Man shew so far his Ignorance, as to have Recourse to the first Cause, or any supernatural Action in explaining them.

EHAP.

#### CHAP. XVI,

Of the Magnitude, Form, irregular Situation, and Origin of Mountains.

HE Mountains of this Earth are nothing else but huge Heaps of Earth and Stones torn to Pieces. But fuch as shew some kind of Magnisicence and Stateliness of Nature; as out of the antient Temples and ruined Amphitheaters of the Romans, we may understand the Greatness of that Nation: And as fuch People are less taken with the Greatness of the Roman Monarchy, who never had feen with their Eyes the Monuments of that Nation; so People that live in plain-Countries, and Regions of pretty even Ground, and had feen nothing else but fome small Hills, and insignificant Swellings of the Ground, can never have a right Notion of the most huge Mountains which are found in other Regions. Such as travelled and have feen the Pyrenean. . . .

Pyrenean, the Alps, and the Apenine Mountains, their Magnitude, their excessive Cragginess, and their wonderful extent, overspreading many Provinces, and vast tracts of Ground, could not but be struck with Admiration. 'Tis true that the height of Mountains is nothing comparable to the Profundity of the Earth; but their Largeness and their wide Bottoms, or Bajes have no small Proportion with the Surface of the Earth; and if there be as many, and as great Mountains, in all other Parts of the World as there are in Europe, I dare say the Mountains do take up the tenth Part of the Terra Firma. Our Geographers do not give us a full and diftinct Account in their Maps, of the Disposition, Multitude, and Greatness of Mountains, being altogether taken up in describing the Situations and Distances of Provinces. Cities and Towns, with the Courses of Rivers; for their Bufiness is to describe the Earth as it may be beneficial to Civil Governments, and not to write a natural History.

But if any Man would take the Pains to go to the Top of the highest Mountains which lye about the middle

of the Alps, and look about him all over the neighbouring Regions, he might fee fuch and fo many Heaps of Earth, and useless Burthens of Nature, without any Order, or Form, as if cafually they had fallen down from Heaven, or the Earth in a drunken Fit had vomited them up. He might fee one Branch of this prodigious and deformed Body stretched forth through Savoy, Dauphine, and other Provinces of France, to the Pyrene's Heights, and the main Ocean; and another Branch according to the Course of the Mediteranean Sea extending through the Norick, Panonian and Dalmatian Heights, to Thrace and Pontus; behind him he might see the snowy Tops of the Rhetian Mountains; and from under his Feet he might view the Appenine Mountains begin, which divide Italy into two. Neither are the northern Parts of Europe, Bohemia, Silefia, Denmark, Norway, Swedland, Lapland, Island, &c. less horrible, by reason of their huge Rocks, great Mountains, Precipices, disjointed Limbs of the Earth, and prodigious Monuments of some antient Ruin: not speaking of the Riphæan

Ripbean Mountains, reaching from the Muscovian Gulf, to the Mouth of the River Obius, which the Muscovites call the great stony Girdle, or Swath; for they think the whole terrestrial Globe to be furrounded by them Mountains. Neither is this particular to Europe, for there is no Continent either in Afia. Africa, or America, no antient and original Island, which is free from Mountains: In each of them are found either Heaps or Chains of Mountains: The Peruvian Mountains in the fouthern America are exceeding long and high; besides many others in the northern America. The Mountain Taurus in Afia was held the greatest of the World; it begins in the leffer Afia from the Pamphilian Sea near the Chelidonian Islands, and goes on through divers Regions, and vast Kingdoms from the West to the East, under divers Names, till it comes to India, dividing all Afia into two Parts, of which one, regarding the North is called Aha within Taurus; and the other which is towards the South, Afia without Taurus. It has feveral other Companions along with it of both Sides, among which the

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the most famous are Antitaurus the greater, and Antitaurus the lesser, which divides Armenia the greater, and the lesser into two, whilst Taurus itself pasfing betwixt Armenia and Mesopotamia, cast forth several Branches towards the North, and South. Likewise the Mountain Imaus, Caucasus, and those of Arabia, with several others in Asia, are famous. In Africa the Mountain Atlas bears up the Heavens with its Shoulders; it goes on from the Coasts of the Atlantick Sea, or from the West of Africa towards the East, through all Africa to the Borders of Egypt. Likewife the Mountains of the Moon embrace betwixt their Horns, a vast Tract of Land, besides innumerable other lesser Mountains. Nor are the Mountains of feveral Islands any thing obscure, especially of those Islands lying in the main Ocean: but enough of this. We may well understand by the Multitude and Magnitude of these Mountains, how rough, rugged, and craggy is the Surface of this Earth. And besides, take notice that these Mountains do not resemble the Parts, or Limbs of a Body well disposed, or set in right Order,

fince not one of them has any regular Form, Beauty, or Grace in its felf, nor any Order, or Disposition with the rest, which might turn to any Use, or Ornament.

As to the Form and Shape of all and each Mountain of these, nothing fo uncertain, nothing fo confus'd, and disordered, as all Ruins useth to be; they are of all Forms and Shapes, but not regular; all rough and craggy Heaps torn in pieces; no Size, no Meafure, no Rule, or Proportion of Parts, no Shadow of Order, no Knack of Art, no Sign of Advice: I mean only the natural and greater Mountains of the the Earth, not the grateful Hillocks of Bacchus, nor the charming Shells of Gold of Palermo, or fuch pleasant little Hills, that by their green Sods, fweet Herbs, neighbouring Springs and Fountains, precious Vines, charming Trees and Groves, are the Delight of many; here we speak of these old, frightful, disagreeable, fad, and heavy Bodies, useless Weights of the Earth, whose hard Heads are frozen in the Clouds, and their rocky Feet being fastened in the lower Earth, stand immoveable these many

#### The Antediluvian World, &c. 293 many Ages, receiving on their folid, fwarthy, craggy Breafts, the infufferable Heat, the Storms and Thunder-Bolts These are the of fo many Years. Mountains which could not take their Origin, but from the Dissolution of the whole terrestrial Globe, in which there can be feen no regular Shape, or Form, no Order or Disposition of Parts, which might shew the least of Industry, Care, or Study, or be defigned for any End; their Situation being the most notable Example of Confusion that ever could be expected; neither could any greater Confusion be occasioned by the greatest Storms, Hurricanes, or Earthquakes. If any Man, either alleep, or drunk, had been carried fuddenly from a plain Country where he was born and educated, and left in midft of the great Mountains and Ruins of the Alps. for Example, when awak'd, or fober, he would fee them new and dreadful Shapes of things, of all Sides Rocks, Stones, and Precipices, Deformity and Defolateness, doubtless he would think himfelf cast out of the Limits of the whole habitable Earth, or thrown into that

Corner of the Universe, where Nature

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(having elsewhere performed the Duty of a Mother and Nurse) heap'd together all the Dreggs and Filth, with all the unfit Matter of the Universe: he would fee there a certain Confusion of all Matters and Forms; the Mountains for the most part entirely of Stones, Flint, or Marble, and but very little of Earth, or mixt with fuch; whose Bowels in many places are hollow, being made the Dens of wild Beafts, and lurking Places of Snakes and Vipers; in other Places swelling with Mines, Metals, and fubterraneous Rivers; in their outward Structure he would fee no Equality, no Proportion; fome exceeding great in Groffness and Height, others small to a Mediocrity; fome with two, fome with three Heads, or Tops, always covered with Snow fince the Memory of Man, both Winter and Summer, tho' of all Sides exposed, and nearer the Sun; others the contrary vomiting Smoak, and Fire from their Tops; Flames, fome outwardly folid in one entire united Body; others torn with many Clefts, and Partitions; fome folitary, and all alone; others heaped on one another,

another, or stretched forth into long Windings and Turnings; some by degrees growing smaller and smaller, and ending in a sharp Top; others of the same Compass both in Root, Middle, and Top; some of a smooth, easy rising, and of a more gentle Ascent; others extream rough and craggy, full of Precipices, and altogether impracticable; and in sine, he might see innumerable Forms, Shapes, and Situations of them irregular Heaps, as all Ruins, and Rubbish use to be.

Now let us fearch and explain the Origin and Causes of these Mountains: In the Beginning of the Creation when the first habitable Earth was made of the Chaos, it could not be of a mountany Form; not only by reason it could never be overflown by any Deluge, as we proved, Chap. 1. but also because fuch a Form was contrary to the Nature of the Thing itself, which could not be made up so of the Particles of the faid Chaos, nor pass immediately from a Fluid and equal Form, into a most rough, craggy, and uneven Shape (fuch as our present Earth is) as we proved, Chap. U 4 518

Chap. 5, and 6. and whosoever confiders well the Matter, and the Nature of Things, he will find that a rough, rocky, and uneven Surface could not be made immediately of the primigenial liquid Mass, whose Particles, being in Motion, took Place according to their intrinsick Propension and Nature. And if you fay that truly it should be so, if Things were left to themfelves, and that they acted according to the Laws of Nature, and natural Motions of fecond Caufes; but the Mountains were made by God's Command, and by the immediate Influence of the first Cause, without any regard to the Laws of Nature, or second Causes: for, in the Beginning of the World he made the great Cavity of the Sea to receive all Waters in, and of the Earth which he cast out from thence, the Mountains were made. I answer that this Hypothesis is not grounded in Antiquity, Scriptures, Fathers, or Reason, was rejected by us, Chap. 6. pag. 107, 108, 109, &c. for there is no Proportion betwixt the Mountains of this Earth, however so big, and the Capacity of the

the Sea-Gulf, which is extended all over half the Surface of this terraqueous Globe. And it is apparent by the Shape and outward Form of the Rocks, that they were made by some forceible breaking and tearing, and not by heaping of them together. But of this enough in the aforesaid 6th. Chapter.

There are others even of an antient Date, who think the Mountains were made by the Deluge, and confequently that the antediluvian Earth was plain and even. But this is to play the Philosopher alla grossa; to say that the Surface of the Earth which was before even, and upon a Level, might become craggy, rocky, and mountainy, as now we fee it, by I know not what Commotion, or Agitation of Water, will bear no Weight with Men of Sense. 'Tis true that this great Change of the Surface of the Earth, happened in Time of the Deluge, but not by that Cause which our Adversaries here affign, and which was altogether unfit for fuch an Effect, especially if the Deluge happened, as they fay it did, by a bare Inundation or Excels

cess of Water coming from some great Rain or other. For what great Agitation of Waves might rife from any Inundation of Waters over a plain even Surface, in an equal Convexity, where no Violence of Weight, either of their own, or of any other external Cause, could force them on, or drive them hither and thither, but rather wherever they fell, there they remained in an Aguilibrium? Truly, in our present Earth, as being full of Mountains, Valleys, and Inequalities, huge Streams and Floods, proceeding from great Rain, fall violently from the Mountains, and run with great Force through the Declivities of the Earth but fince there were no Mountains, no Declivities in the antediluvian Earth, there could be no fuch violent Course of Waters. Neither were there any Winds, Storms, or Hurricanes to agitate the faid Waves; for, to what End? By what Motion or Cause? And if there were too, that would not do: for fince we fee that fuch Violence of Waves, Billows and Floods, do rather

overthrow, and cast down all Heights and high Places of any Resistance, they would sooner throw down all Mountains, and level them with the rest of the

Earth, than raise them up.

Others fay, the Mountains were made by Earthquakes, and by the breaking up of feveral fubterraneous Cavities; for great Parts of the Earth tumbling down into the faid Cavities, what remained of the Earth unmoved, and in its former State, appeared like great Mountains. I must confess that such like Things have happened fometimes, and that some little Hillocks and unevenness of the Earth might proceed from thence: but to fay that this was the only and universal Cause of all Mountains, most great both in Bulk and Number, we cannot be perfuaded to it. What Time, what Age did these Earthquakes happen? Or why no fuch feen fince the Memory of Man? Moreover, that does not agree with the Form and Situation of Mountains; for if there were any unmoved Heaps, or Tracts of Earth, which stood stedfast and firm, without any Moti-

on or Alteration, during the Ruin of the neighbouring Tracts of Land by the Earthquakes, they must have had their Tops entire, plain and even, as being the untouch'd and unaltered Surface of the plain, levelled Earth; but we see the contrary, for the Heads and Tops of Mountains are generally rough, rugged and very uneven, and their Bodies bending of all Sides, as if they were removed from their natural Situation: how then could they proceed from any Earthquake, as our Adversaries explain? Besides, all Continents, small or great, have a notable Declivity from their Inland Parts towards the Seas; and likewife the Sea-Gulf has a great and continual Declivity from the Coasts towards the Middle; which feems to prove that all the Parts of the Earth were Partakers of some general Ruin, by which the whole exterior Earth was disfolved, and removed from its natural Situation. In fine, that this Ruin is very antient, and that it happened fuddenly and all at once, and that by some peculiar Causes not extant

extant now, as Earthquakes are; it well appears not only by what we faid before of the universal Deluge, but also because no such like Thing happened in our Days, nor ever was mentioned by any of the most antient Writers. Who recorded the Origin, and Birth Day of the Alps of Mount Caucalus, or of the Mountains of the Moon? What Year from the Building of Rome, or what Olympiad were they made, or did that Earthquake happen? Authors at all Times have noted the Rife and Beginning of Monarchies, and dominant Cities, of Earthquakes and Floods, of Comets and new Stars, and of all other notable and prodigious Alterations that happened either in Heaven, or Earth, vet no Man made mention of the Beginning of Mountains no Monuments can be shewn for it, no Tradition bears fuch Memory. We find truly, either written undoubtedly, or received from our Forefathers, that fuch, or fuch a Spot of Ground, either swelled up into a Hillock, or funk down into a Lake, or Valley, by an Earthquake: but what is that to those huge Heaps of Earth

Earth the Atlantick, the Taurus, the Riphean Mountains? Do you think but we should find some thing said of the Earthquake which was the Cause of these Mountains, either in Writing, or by Tradition, or by some other Monument, as of the small Hillocks and Vallies, if any fuch thing had ever happened? In short, either this Earthquake, of which we speak, happened before the Deluge or after the Deluge, or in Time of the Deluge? If the first, then the general Deluge could never happen, as we have faid, Chap. 1. If the fecond, doubtless it would be recorded? If the third, then our Adverfaries agree with us, for we fay likewife that the superabyssian Earth being then broken in Pieces by an universal Earthquake, or rather Earth-bursting, and Earth-finking, the Mountains were first made.

Having now shewn the Improbability of the adverse Opinions, let us see how the Origin and Beginning of Mountains, with all other Phænomena's relating thereto, may conveniently be explained in our Hypothesis of the Diffolution

folution of the superaqueous Earth in Time of the Deluge. For, when the superabyssian Earth began to open, and that it broke in feveral Fragments, of which many tumbled down into the Abyss, as the Parts of such Fragments which remained over the Water, were called the dry Land, and became the habitable postdiluvian Earth, so the Parts of that dry Land which became higher than the rest, were called Hills, or Mountains. And to understand how some part of those Fragments became higher than others; note, that the few Fragments into which the fuperaqueous Earth was first divided, being exceeding great, and spread over the Face of the Abyss in vast Tracts, they could not in that Form and Greatness of their Extension, drop down into the Abys; for the Air underneath hindered their Descent: not truly the Air which was nearer the Extremities, or Borders of the Fragment, for that Part of the Air might eafily get out without any Impediment; but the Air which was far from the Extremities, and thous fands of Miles distant towards the middle Parts

Parts of the Fragment; this Air, I say, could not get out in fuch a thort Time, and confequently it refifted and supported strongly the Weight of the Superincumbent Fragment. In the mean while the extream, or bordering Parts of the faid Fragment, being pressed by their own Weight, foon followed the Air which yielded to them, and forthwith fell down into the Abyss: And fince the intermediate Parts of the fame Fragment could , not fall down with the same Facility, they were kept up by main Force, and then they began to bend like a Bow, by the Weight of their drooping Extremities; and foon after, being overmuch bent, they clearly split, and broke in two, or more Fragments; and the upper Parts of these Fragments leaning one upon the other, did mutually fustain themselves up in the Manner of a Vault, and stood far over the Abyssi The rough and craggy Tops of these Vaults, or Fragments, make up the high and rugged Parts of the Earth, and the Tracts of our greatest Mountains, from which to the Sea-shoars, there's

there's always fome Declivity, either directly and straight forward, or obliquely following the Course of Rivers, which for the most part, take their Origin from these Tracts: And thus the Chief and Great Mountains were made.

The Mountains of a lesser Size were made by Concussion, after this man-ner. When first the inferior Parts of any of the faid Fragments in its Descent touched the Bottom of the Abyss, or even perhaps the Surface of the Water, that sudden Obstruction, or Hindrance of its Motion, caused a great Concussion, shaking and quivering of all the Parts of the faid Fragment, by means of which they fuddenly burfted again afunder, and broke in feveral Parts. And from this Concuffion, or fecond Difruption, all the Inequalities happened, which we fee in the Surface of the Earth, both the high and low Regions, and the unequal Parts of the fame Region, the rough Places, the Hills, the Hillocks, the declining Plains and Fields, and Vallies of feveral Forms; for the Figure of the Earth X

is every where unlike, neither do the fame Form, Order, and Lineaments of its Surface continue in any two Places. Likewise the inward Parts, and Veins of the Earth are often broken afunder, which proceeds for the most Part from the faid Concussions. And by this we see how the Mountains, fmall and great, with all the Inequalities and Ruggedness of the Earth, were made in our Hypothesis: which supposed we cannot admire either the Shape and Form of Mountains, or their Figure however fo irregular, and torn afunder, or the great Disorder we see in the Situation of their Parts; for all this necessarily follow the Modus of their Generation. Neither can we admire that the Mountains, for the most Part, are full of Caves and Cavities inwardly, whether filled with Exhalations, Air, or Water; for being fustained, for the most part, after the Nature of a Vault in that high Situation, they cannot be inwardly folid: And fuch of them as were made by the heaping of one upon the other, must also admit feveral void and vacant Spaces betwixt their

their Parts, now more, now less, as it happens in all Ruins, by reason of their unequal clofing and joining together. For the same Reason we cannot admire that mountany Regions are more subject to Earthquakes, than others: For they have more Caves and Cavities, which contains more or less the Causes of Earthquakes; and by the fame Reason some Mountains fell down into the faid Cavities, the Vaults and Props which supported them, being either broken by fome fudden Violence, or worn away by the length of Time. In fine, we cannot admire these Continuations, and long Courses of Mountains fiding by one another for long tracts of Ground, which may be feen in all Continents, and also in some Islands; the Reason of this plainly appears by what we have faid: For the huge Fragments which bursted afunder towards their middle Parts, and therefore being raised higer there than the other Parts, and being bent and inclining one against the other, in a long Row, and continual Course, made up those Continuations and Chains of Mountains fiding by one another; whose Difference and Diversity X 2

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Diversity proceed from the Figure, Quantity, and Qualifications of the broken Fragment. And let this suffice as well concerning the Origin, Situation, and Form, both inward and outward, of Mountains, as concerning this whole Treatise; Ad Majorem Dei Gloriam.

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